JX-SV77

JVC

SERVICE MANUAL

VIDEO EDITING PROCESSOR

PAL

JX-SV77 (E), (EB), (EK)

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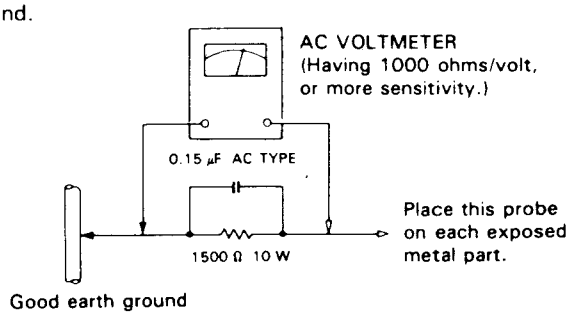
Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage current check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).


AC VOLTMETER
(Having 1000 ohms/volt, or more sensitivity.)
0.15 μF AC TYPE
1500 Ω 10 W
Place this probe on each exposed metal part.
Good earth ground

1. Features

- **Multi-function video editing procesor, fully compatible with Super VHS VCRs and camcorders**
  Two source inputs, a recording output and a monitor output—all with connectors compatible with Super VHS.
- **Versatile wipe function with background color generator**
  Uo tp 16 wipe patterns are available by combining basic 5 patterns, with 8 background colors.
- **Video/audio faders**
  Picture and sound can be faded in and out independently; the picture can be faded to and from any of 8 background colors.
- **Versatile character generator function**
  Any required titles can be created on the monitor screen and recorded on the VCR, with a 5-page memory which includes a scroll page. User-created titles can be displayed in any of three ways; "insert", "fade in/out" or "scroll".
- **Easy color balancing with joystick controller**
  The white balance of the picture can be compensated easily using a joystick, with a Wide Range button when more compensation is required.
- **Audio mixing function**
  Audio mixing is possible with either AUX or microphone inputs; audio level meter provided.
- **Image enhancement**
  Variable image enhancer reduces picture degradation during editing.
- **Color level adjustment**
  Makes adjusting color intensity easy.
- **Editing control function**
  When used together with specific JVC VCRs (with remote pause jacks), recording and playback can be started and paused with the operations of the VCRs synchronized.
- **Color-bar generator built-in**
  A convenient color-bar generator is built in for the adjustment of monitors, etc.
- **Bypass switch provided**
  Bypass switch allows you to check theinput source and the edited output by pressing a single button.

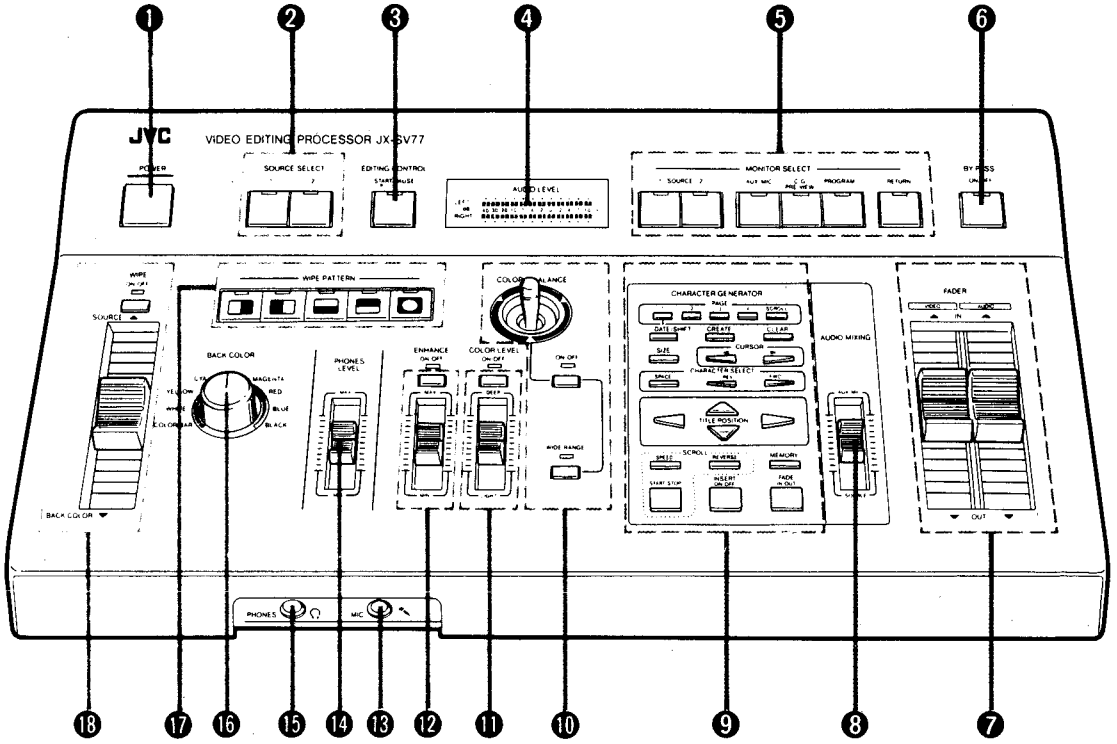
2. Specifications

Inputs		
Source	:	2 lines (21-pin connector; video, audio L/R)
AUX	:	1 line (RCA pin jack; audio L/R)
MIC	:	1 line (6.3 mm dia. standard monaural phone)
Outputs		
Monitor	:	1 line (21-pin connector; video, audio L/R)
Rec Out	:	2 lines (21-pin connector; video, audio L/R)
Editing Control jacks		
For recording VCR	:	1 line (3.5 mm dia. minijack)
For playback VCR	:	2 lines (3.5 mm dia. minijack)
Video Input		
Reference input	:	1.0 Vp-p (75 ohms, unbalanced)
Maximum input	:	1.5 Vp-p (75 ohms, unbalanced)
Video Output	:	1.0 Vp-p (with reference input)
Audio Input		
Reference input	:	−10 dBV (316 mV, 47 kohms)
Maximum input	:	+6 dBV (2.0 V at 1 kHz, 1% distortion)
Microphone Input		
Reference input	:	−65 dBV (0.56 mV, 4.7 kohms)
Audio Output	:	−10 dBV (316 mV, 1 kohm) (with reference input)
Headphone Output	:	15 mW max. (with a load impedance of 33 ohms, 3% distortion)
Video Frequency Response	:	10 MHz −1 dB ±2 dB (S-video in/out)
Audio Frequency Response	:	5 Hz −20 kHz ±2 dB
Audio Harmonic Distortion	:	0.01% (with reference input, 1 kHz)
Power requirement	:	AC 220 V~, 50/60 Hz AC 240 V~, 50 Hz (U.K. only)
Power Consumption	:	20 watts (Power ON), 2.5 watts (Power OFF)
Dimensions	:	435 (W) × 106 (H) × 269 (D) mm (including knobs, jacks and feet)
Weight	:	3.3 kg

Design and specifications subject to change without notice.

3. Names of Parts and Their Functions

< CONTROL PANEL AND FRONT PANEL>



❶ POWER button
Press this button to turn the power ON.
The JX-SV77 consumes approximately 2.5 watts of electricity even when the power is OFF, to back up the memory holding switch/control settings.

❷ SOURCE SELECT buttons
Press these buttons to select the input source.

❸ EDITING CONTROL button
Press this button to start the playback and recording VCRs simultaneously. Pressing it again sets both VCRs to the pause/still mode. (Only with certain JVC VCRs.)

❹ AUDIO LEVEL meter
This indicates the level of the audio signal output from the MONITOR connector.

❺ MONITOR SELECT buttons
SOURCE 1/2 buttons:
Select the input signals (picture and sound before processing) to be monitored with these buttons.
AUX/MIC button:
Press this button to select the sound input from either the AUX or MIC jacks.
C/G PRE-VIEW button:
Press this button when the characters are only to be superimposed on the screen of the TV connected via the MONITOR output (when creating titles).
The buttons in the Character Generator control section are effective only when this is ON.
PROGRAM button:
Press this button to monitor the signals output from the REC OUT jacks. With this button ON, buttons in the Character Generation control section do not function.
RETURN button:
Press this button to monitor the signal returned from the VCR used for recording.

❻ BY PASS button
Press this button to feed the input signal directly to the output jacks (with no processing in the JX-SV77).

❼ FADER controls
VIDEO FADER controller:
Use to fade the picture in and out. Normally set to the top (IN) position. Slide toward the bottom (OUT) for the background colour selected with the BACK COLOR knob.
AUDIO FADER controller:
Use to fade the sound in and out. Normally set to the top (IN) position. Slide toward the bottom (OUT) to decrease the output level.

❽ AUDIO MIXING control
Use this to mix the sound from the AUX audio inputs or MIC jack with the source sound.

❾ CHARACTER GENERATOR control panel
Use these buttons to select the characters to be superimposed on the picture.
Refer to "Character Generator Controls" on page 4.

⑩ COLOR BALANCE controls
COLOR BALANCE ON/OFF button:
Press this button to use the COLOR BALANCE joystick.
COLOR BALANCE joystick:
Adjust the white balance or tint of the picture with this joystick.
WIDE RANGE button:
Press this button to widen the control range of the colour balance.

⑪ COLOR LEVEL controls
COLOR LEVEL ON/OFF button:
Press this button to ON to change the colour intensity.
COLOR LEVEL controller:
Slide this control toward LIGHT to decrease the colour intensity and toward DEEP to increase it.

⑫ ENHANCER controls
ENHANCER ON/OFF button:
Press this button to activate the enhancer.
ENHANCER controller:
Slide this control toward MAX to increase the enhancement effect and toward MIN to decrease it.

⑬ MIC jack
Plug a microphone into this jack when mixing the sound picked up from the microphone with the source sound.

⑭ PHONES LEVEL control
Adjust the output level of the headphone sound with this knob.

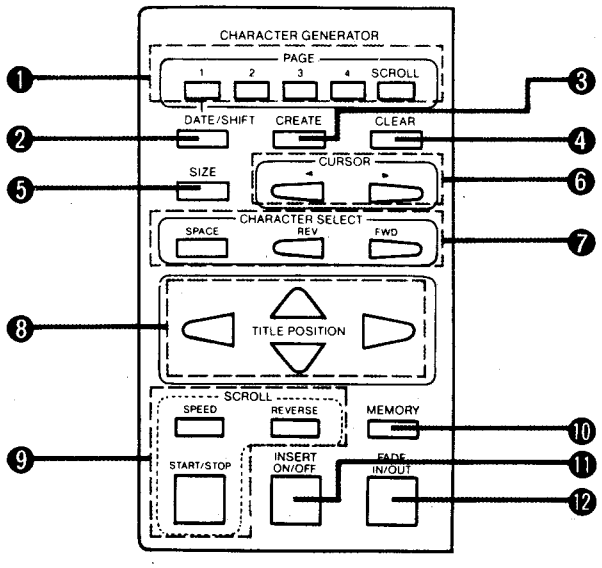
⑮ PHONES jack
Connect stereo headphones to this jack to monitor the sound output from the MONITOR output connector.

⑯ BACK COLOR select knob
Select the background colour for wipes and fades with this knob. Set to the COLOR BAR position to select the colour bar chart.

⑰ WIPE PATTERN select buttons
Select the required wipe pattern with these buttons. Various wipe patterns are available by combining these basic patterns (except for circle ◘ pattern).

⑱ WIPE controls
WIPE ON/OFF button:
Press this button to ON to activate the wipe function.
WIPE controller:
Slide this knob toward SOURCE to wipe the picture in and toward BACK COLOR to wipe it out.

< CHARACTER GENERATOR CONTROLS >



❶ PAGE select buttons
Select one among five pages; PAGE 1 to PAGE 4 and SCROLL. Press these buttons a second time to emphasize the characters by adding the black outline around each (white) character. (Press a third time to remove the outline.)

❷ DATE/SHIFT button
This button functions to turn the date indication ON and OFF when PAGE 1 is selected. Otherwise, it functions as a SHIFT button (to alternate between button functions when setting the position of the "headline" on the SCROLL page).

❸ CREATE button
Press this button to create titles.

❹ CLEAR button
Press this button to cancel all the titles created on the selected page.

❺ SIZE button
Press this button to change the size of the characters on the selected page. Up to 5 sizes are available, except for the titles on PAGE 1.

❻ CURSOR (◄ , ►) buttons
These buttons are used to move the cursor when creating titles. Press ◄ to move the cursor to the left and press ► to move it to the right.

❼ CHARACTER SELECT buttons
SPACE button:
Press this button to leave a space between characters.
REV, FWD buttons:
These buttons are used to select the required character. Press FWD to change the letters in ascending order, and press REV to change in descending order.

❽ TITLE POSITION buttons
Press these buttons to select the position in which the titles are to be placed on the screen.

❾ SCROLL control buttons
(Effective only when SCROLL is selected.)

SCROLL SPEED button:
Press this button to vary the scrolling speed. The scroll speed can be selected in four steps.

SCROLL REVERSE button:
Press this button to reverse the scrolling direction. (Normally, titles are scrolled from the bottom to the top of the screen.)

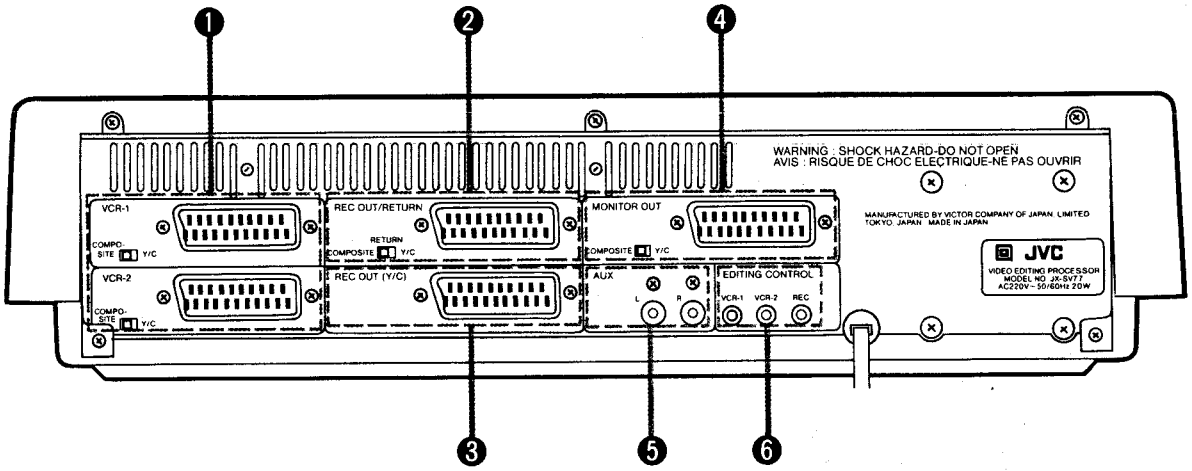
SCROLL START/STOP button:
Press this button to start scrolling. Press it again to stop scrolling.

❿ MEMORY button
Press this button to store the title you have created in memory. While creating titles, press this button to change from one page to another.

⓫ INSERT ON/OFF button
Press this button to turn the superimposition of the stored titles to be output to the REC OUT jacks on and off.

⓬ FADE IN/OUT button
Press this button to fade the superimposed titles output to the REC OUT jacks in and out.

< REAR PANEL >



❶ VCR-1, VCR-2 input connectors and signal select switches
Connect the output connectors of the VCRs used for playback to these connectors. Set the signal select switches (COMPOSITE or Y/C) to the appropriate positions, depending on whether the input signals are composite or Y/C separated video signals.

❷ REC OUT/RETURN connector and signal select switch
Connect the input/output connector of the VCR used for recording to this connector. The video signal output from this connector is a composite signal.
When using the RETURN function, the video signal returned from the VCR used for recording can be selected by the setting signal select switch to the appropriate position, depending on whether the signal is a composite or Y/C separated video signal.

❸ REC OUT (Y/C) connector
Connect the input connector of the Super VHS VCR used for recording to this connector. Only a Y/C separated video signal is output from this connector.

❹ MONITOR OUT connector and signal select switch
Connect the input terminals of the monitor TV to this connector. The signal output from this connector can be switched between a composite or Y/C separated video signal with the signal select switch.

❺ AUX input terminals
Connect the output terminals of an outboard audio component to these terminals, using conventional pin-jack cables. The signals input to these terminals will be cancelled automatically when the microphone is plugged into the MIC jack.

❻ EDITING CONTROL connectors
When suitable JVC VCRs are used for recording and playback, connect their Remote Pause jacks here.

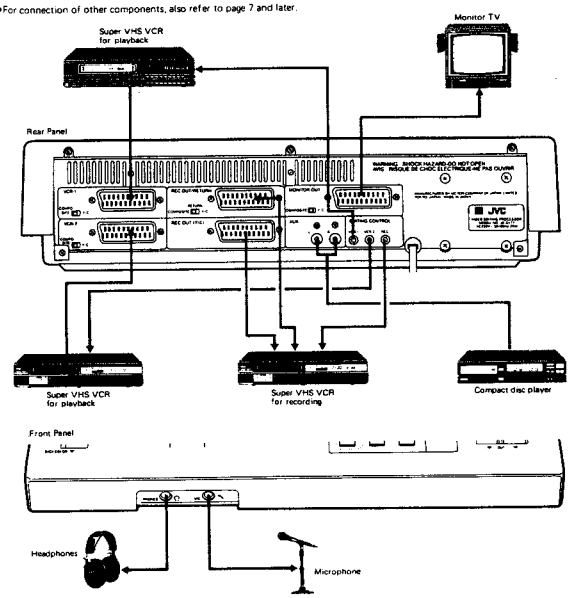
4. Operation Utilization

CONNECTIONS

- The following connection diagrams show some examples of connection of the JX-SV77 in your video/audio system. Please read the instructions of the components to be connected with this unit.
- Before making connections, make sure that the power of all components is turned OFF.

■ System Connection Example

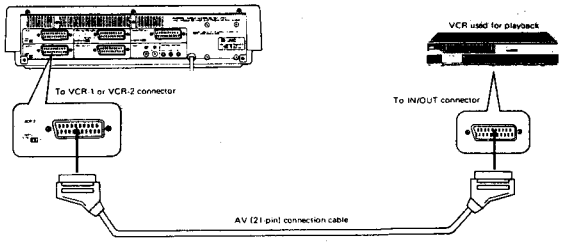
- For connection of other components, also refer to page 7 and later.



Note:
- Do not connect VCRs other than specified JVC models to the EDITING CONTROL jacks on the rear panel. They will not work correctly and may cause malfunctions. For JVC VCRs that can be connected to these jacks, refer to page 20.

■ SOURCE (VCR-1/2) Connectors

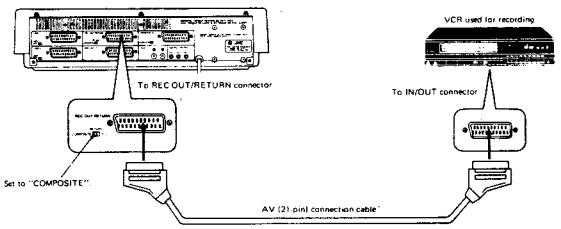
Connection of playback VCR:



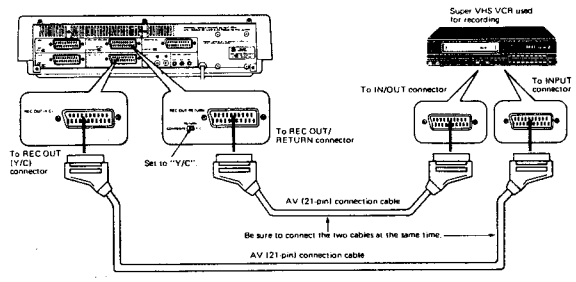
- Set the signal select switches at the side of the connectors to either the COMPOSITE or Y/C position according to the setting of output signal selector on the playback VCR.

■ REC OUT/RETURN and REC OUT (Y/C) Connectors

When recording and playing back with "composite" video signal:



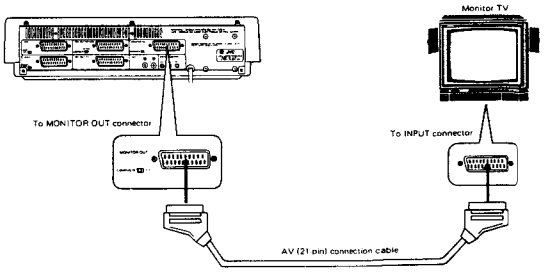
When recording and playing back a "Y/C separated" video signal:


Super VHS VCR used for recording
To IN/OUT connector
To INPUT connector
To REC OUT (Y/C) connector
To REC OUT/ RETURN connector
Set to "Y/C".
AV (21-pin) connection cable
Be sure to connect the two cables at the same time.
AV (21-pin) connection cable

Note:
- Set the input selector (composite or Y/C) on the recording VCR connected to the REC OUT (Y/C) connector to the "Y/C" position. Also, when playing back the tape on the VCR used for recording, set the video output switch on the VCR to the "Y/C" position.

■ MONITOR OUT Connector

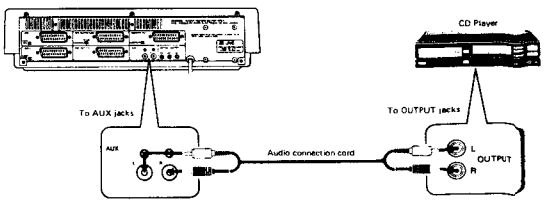
Connection to monitor TV:



- Set the output signal select switch to the "COMPOSITE" position when monitoring a composite video signal, and set it to the "Y/C" position when monitoring a Y/C separated video signal.

■ AUX Audio Input Terminals

Connection to Compact Disc player:



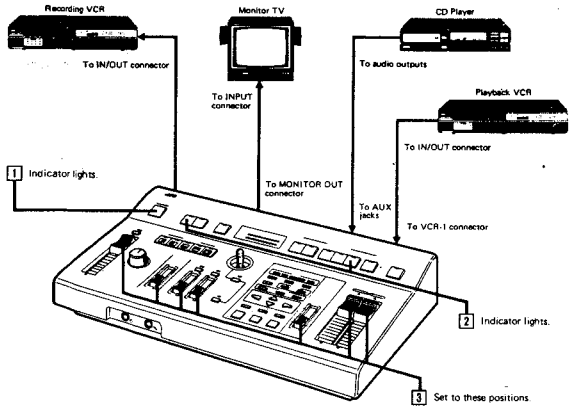
OPERATION (Basic Operations)

●The following diagram shows an example of connections, and is used to explain the operating procedure.
●Also carefully read the instructions of the components connected to this unit.

■ Before Operating

●First make preparations before starting operations.

Connection Example:



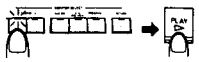
1 Connect the components as shown above, referring to the "Connections" on page 6 – 9, and press the POWER buttons of the JX-SV77 and other components to switch them on.
2 Press the SOURCE SELECT "1" button and the MONITOR SELECT "PROGRAM" button. (All other buttons should be OFF.)
3 Set the knobs and FADER controls as shown in the above diagram.

■ How to Use MONITOR

To monitor the signal from the VCR-1 deck used for playback:

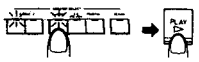
<Preparations>
Perform the operations in "Before operating" steps 1 – 3 on page 10.

1 Press the MONITOR SELECT "SOURCE 1" button.
2 Play back the VCR-1 deck used for playback.



To monitor the signal from the AUX jacks (CD player):

1 Press the MONITOR SELECT "AUX/MIC" button so that the indicator lights. At this time, check that the "SOURCE 1" indicator is lit.
2 Play back the CD player, etc. connected to the AUX jacks. At this time, check that the microphone is not connected to the MIC jack.



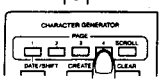
3 To monitor the input signal from the playback VCR-1 again, press the AUX/MIC button again or press the SOURCE 1 button.

To monitor the character generator:

<Preparations>
Play back the VCR deck used for playback.

1 Press the MONITOR SELECT "C/G PRE-VIEW" button.

2 Press the page button in the Character Generator control section corresponding to the required page memory. If titles have been stored in memory, they will be superimposed on the picture.



3

●When page indication appears (shows the create mode):

●If no page indication appears (shows that the INSERT switch is ON):

When monitoring an edited tape with the recording VCR:

1 Press the MONITOR SELECT "RETURN" button.
2 Rewind the tape to the point at which you want to start monitoring and play it back.

To preview an edit using VCR-1 and AUX:

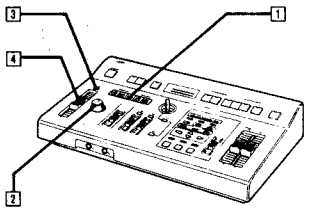
1 Press the MONITOR SELECT "PROGRAM" button.
2 Set the playback VCR (VCR-1) or CD player, etc. (connected to the AUX jacks) to the playback mode and perform the required functions using the wipe and fader controls of the JX-SV77, to preview the processed picture and sound.

Cautions on editing:
●Background colour output, white balance adjustment, creating titles with the character generator and other video processing cannot be done unless a video signal is input.
●The picture from a pre-recorded tape may be different from that seen on the monitor in terms of colours or noise, depending on the VCR and the video tape used. It is advisable to perform a test recording in advance.
●The output of the background colour may be different due to improper colour adjustment, depending on the monitor TV used.
●When video tape having an unsatisfactory video synchronizing signal due to repeated editing or a video source with a high level of noise is used, picture instability, incorrect background colour or unstable wipe patterns may occur. This does not indicate a malfunction of this unit.
●Switching of SOURCE SELECT buttons during edit recording may disturb the picture. Do not switch the sources during recording.

■ How to Use WIPE Function

●To wipe the picture in and out.

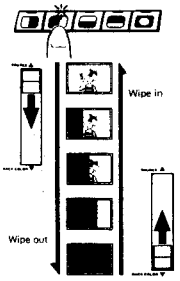
The picture on the screen can be replaced with the required background colour in a variety of patterns using the wipe function.



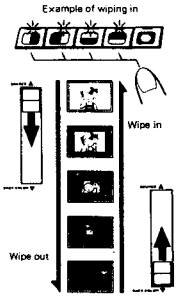
<Preparations>
Perform the operations in "Before operating" steps 1 – 3 on page 10 to play back the VCR-1 deck used for playback.

1 Press the WIPE PATTERN button, and select the required pattern.
With the 5 WIPE PATTERN buttons ( ), any of four patterns except for circle wipe ( ) can be used in any combination, making possible 16 wipe patterns.
2 Use the BACK COLOR knob to select any of eight background colours (white, yellow, cyan, green, magenta, red, blue, black) or a colour bar chart.
3 Press the WIPE button.
4 Slide down the WIPE controller to wipe the picture out and slide up it to wipe the picture in.

Example of wiping out



Example of wiping in

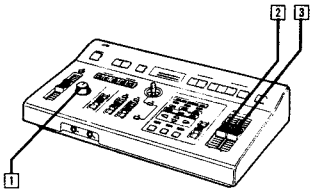


Notes on use of WIPE function:
●When a picture without a colour signal (such as that from a monochrome (B/W) video camera) is used, the background colour selected will not appear.
●When the quality of the input video signal is poor, the background colour may be modified slightly, noise may increase or wiping may not be done clearly. Also refer to "Cautions on editing" on page 12.
●When the wipe pattern is changed or the playback VCR is set to the still mode during wiping, the wipe pattern may fluctuate or the picture may be distorted.

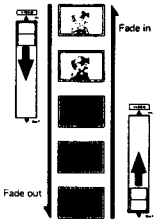
■ How to Use FADER Function

●To fade the picture and sound in and out.

The picture on the source screen can be faded in and out gradually with the required background colour, while the sound can be also faded in and out simultaneously or independently.



Example of video fading



<Preparations>
Perform the operations in "Before operating" steps [1] – [3] on page 10 to play back the VCR-1 deck used for playback.

Video fading:

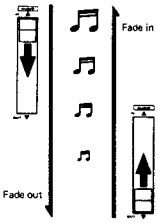
[1] Select the required background colour with the BACK COLOR knob.

[2] Slide down the VIDEO FADER control to fade out the picture, and slide up it to fade the picture in again.

Audio fading:

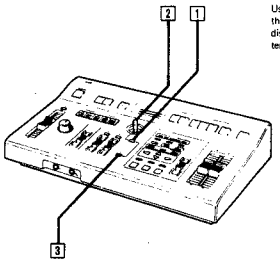
[3] Slide down the AUDIO FADER control to decrease the level of output sound gradually, and slide up it to increase the level of output sound.

Example of audio fading



Notes on use of FADER function:
●When the quality of the input signal is poor, the background colour may be modified slightly, noise may increase or fading in/out may not be done cleanly. Also refer to "Cautions on editing" on page 12.
●When the wipe and video fader functions are used simultaneously, the brightness of the picture may be changed slightly depending on the colour selected.

■ How to Use COLOR BALANCE



Using the COLOR BALANCE joystick, recordings made with the video camera set to the incorrect white balance and distorted colour balance can be compensated, or modified intentionally.

<Preparations>
Perform the operations in "Before operating" steps [1] – [3] on page 10 to play back the VCR-1 deck used for playback.

White balance adjustment:

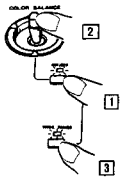
[1] Press the COLOR BALANCE ON/OFF button to ON.

[2] Operate COLOR BALANCE joystick to adjust the white balance. Set so that a white object looks like white, or human skin looks most natural.

When over-adjusting:

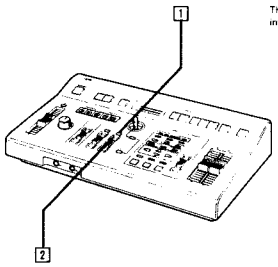
[3] To change the colour balance greatly or intentionally apply an exaggerated effect, press the WIDE RANGE button.

How to generate special colour effects:
With the above operations [1], [2], you can gradually change a colour picture into a monochrome picture, or make a scene recorded in daylight appear to have been recorded at dusk. To make the picture monochrome, set the COLOR LEVEL control to its lightest position. Refer to "How to use colour level control" on page 16.



Notes on use of COLOR BALANCE:
●Video tapes recorded with extremely bad white balance may not be compensated sufficiently.
●When a video source with no colour signal such as that from a B/W video camera is input, the required colour may not be obtained.
●Also refer to "Cautions on editing" on page 12.

■ How to Use COLOR LEVEL Control



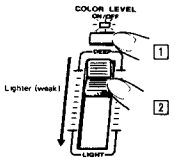
The COLOR LEVEL control allows you to change the colour intensity of the source picture.

<Preparations>
Perform the operations in "Before operating" steps [1] – [3] on page 10 to play back the VCR-1 deck used for playback.

Colour level adjustment:

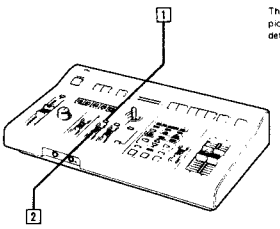
[1] Press the COLOR LEVEL button so that the indicator lights.

[2] Slide the COLOR LEVEL control to adjust the colour intensity. Set the DEEP (uppermost) position for the same intensity as the input signal, or slide toward LIGHT to get a lighter picture.



Note on use of COLOR LEVEL control:
●Even when the COLOR LEVEL control is set to the LIGHT position, a completely monochrome (black & white) picture may not be obtained, depending on the source used.

■ How to Use the ENHANCER



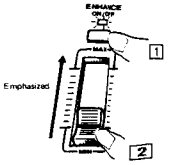
The ENHANCER control allows you to compensate blurred pictures to obtain a sharper image (to emphasize the edges or details of the picture).

<Preparations>
Perform the operations in "Before operating" steps [1] – [3] on page 10 to play back the VCR-1 deck used for playback.

Image enhancement:

[1] Press the ENHANCER button.

[2] Slide the ENHANCER control toward MAX (top) to emphasize the edges of the picture. During editing, it is recommended to set to a slightly weaker position to obtain a clearer picture. Set to the MIN (bottom) position to apply no enhancement effect.



■ How to Use the COLOR BAR Chart

<Preparations>
Perform the operations in "Before operating" steps [1] – [3] on page 10 to play back the VCR-1 deck used for playback.

To generate the colour bar chart:

[1] Set the BACK COLOR knob to the COLOR BAR position.

[2] Slide the VIDEO FADER control downward.

Notes on use of ENHANCER:
●When too much enhancer effect is applied, noise may increase or the picture may be distorted.
●The recorded picture may be slightly different from that seen on the monitor TV screen. Perform test recording in advance.

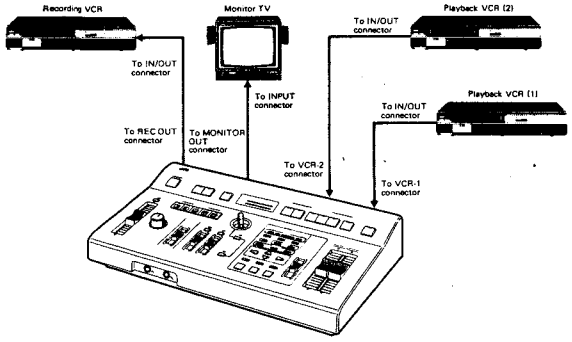
Note on use of COLOR BAR chart:
●The colour bar chart will not be output when no video signal is input.

OPERATION (Practical Operations)

●The following shows an example of connections. Carefully read the instructions of the components to be connected.

■ Editing with Two Playback VCRs

< Editing Example >
When editing between two VCRs and recording onto another VCR:



<Preparations>
Connect each component as shown above referring to "Connections" on page 6 – 9.

[1] Turn on the power of the JX-SV77 and other components.

[2] Press the SOURCE SELECT 1 button.

[3] Set the playback VCR (1) to the playback mode.

[4] Operate the wiper or colour balance, etc. as required and start recording on the recording VCR.

[5] After editing is finished, set the recording VCR to the record-pause mode.

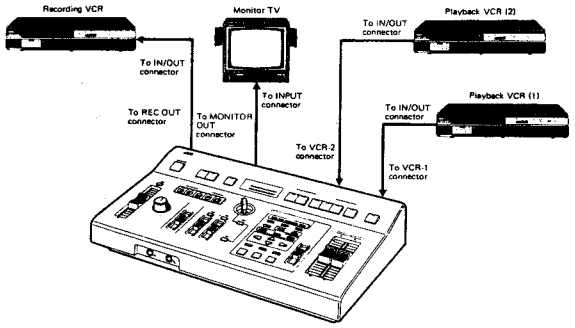
[6] Press the SOURCE SELECT 2 button.

[7] Set the playback VCR (2) to the playback mode and follow the operations in steps [4] and [5].

■ How to Use the EDITING CONTROL Function

The "Editing Control" function allows the playback and recording VCRs to start and pause simultaneously (with specific JVC VCRs having REMOTE PAUSE jacks).

< Editing Example >
When using the Editing Control function to play back the playback VCR-1 then VCR-2 while recording the material with the recording VCR.



<Preparations>
●Connect each component as shown above, referring to "Connections" on page 6 – 9.
●Using miniplug cables, connect the EDITING CONTROL "VCR-1" jack and "VCR-2" jack on the rear panel of the JX-SV77 to the "REMOTE PAUSE" jacks of the playback VCRs (1) and (2), and also connect the "REC" jack of the JX-SV77 to the "REMOTE PAUSE" jack of the recording VCR.

[1] Turn on the power of the JX-SV77 and other components.

[2] Press the SOURCE SEELCT 1 button.

[3] Locate the editing start point on the playback VCR (1) and set to the still (pause) mode.

[4] Set the recording VCR to the record-pause mode.

[5] Press the EDITING CONTROL button on the JX-SV77. (Approx. 16 seconds later, the playback VCR will be set to the play mode while the recording VCR will be set to the record mode automatically.)

[6] To stop editing, press the EDITING CONTROL button again. (The playback VCR will be set to the still mode and the recording VCR will be set to the record-pause mode.)

[7] Press the SOURCE SELECT 2 button.

[8] Locate the editing start point on the playback VCR (2) and set to the still mode.

[9] Repeat steps [4] – [6].

JVC VCRs allowing EDITING CONTROL

Applicable VCRs both to recording and playback:
HR-S5500, S5000, D950, D830, D750, D700, D620, D530, D521, D520, D440
(JVC VCR equipped with REMOTE PAUSE terminal and pre-roll function as well.)

Applicable VCRs only for recording:
HR-D430, D370, D330, D230, D227, D190, D180
(JVC VCR equipped with REMOTE PAUSE terminal.)
For details, consult JVC's retailers or JVC's service contacts.

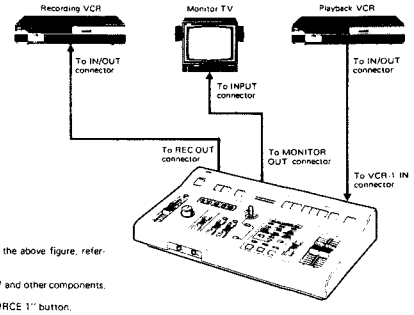
VCR Pre-Roll function:

So that the editing timing of two machines is synchronized correctly, the pre-roll function slightly rewinds the video tape and sets the VCR to the standby mode several seconds before the editing start point to obtain clearer transitions. The Editing Control function provided with this unit allows this "pre-roll function" so the playback and recording VCRs can start and pause simultaneously.

Notes on use of EDITING CONTROL:
- **This function is available only when specific JVC VCRs (having Remote Pause jacks) are used together with this unit.**
- **The EDITING CONTROL function does not operate correctly unless JVC VCRs used for both playback and recording and they are equipped with Remote Pause jacks.**
- **When connecting the EDITING CONTROL jacks, set the recording VCR to any mode other than record-pause, and the playback VCR to any mode other than still. Also set the EDITING CONTROL button to the PAUSE mode (with the indicator not lit).**
- **To stop editing, be sure to stop the operation by pressing the EDITING CONTROL button on the JX-SV77. (Do not use the buttons on the VCRs.) However, when stopping editing before recording actually starts (within 16 seconds after pressing the EDITING CONTROL button), first press the stop buttons of the playback and recording VCRs, press the EDITING CONTROL button so that the indicator goes out, then perform operations from the beginning.**
- **If the input signal is switched over during editing by pressing the SOURCE SELECT buttons, the recording VCR will be set to the record-pause mode while the playback VCR will be set to the still play mode. At this time, the picture may be distorted. For this reason, do not switch input sources during editing.**

■ How to Create Titles

[Editing Example-1]
To create the title "HAPPY BIRTHDAY 16 JUN. 1990" on Page-1:



<Preparations>
Connect each component as shown in the above figure, referring to "Connections" on pages 6 – 9.

[1] Turn ON the power to the JX-SV77 and other components.

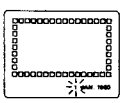
[2] Press the SOURCE SELECT "SOURCE 1" button.

[3] Start playing back the VCR used for playback.

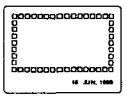
[4] Press the MONITOR SELECT "C/G PRE-VIEW" button.

[5] Set the JX-SV77 to the title create mode.
(1) Press the PAGE-1 button.
(2) When the page indication appears:
Press the CREATE button.
(3) If the page indication does not appear (INSERT ON mode):
Press the INSERT ON/OFF button once to set to the INSERT OFF mode, and press the CREATE button.

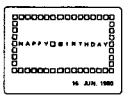
[6] Start creating the title.
(1) Press the DATE button so that the date indication appears. ("1" blinks as shown in the diagram on the right.)



(2) Press the CHARACTER SELECT "FWD" button to enter "16".
(3) Press the " ▶ " cursor button so that the cursor moves to the "month" position.
(4) Press the CHARACTER SELECT "FWD" or "REV" button to enter "JUN".
(5) In the same way, enter "1990" as the year, using the cursor buttons and the CHARACTER SELECT "FWD" and "REV" buttons.



(6) Press the " ◀ " or " ▶ " cursor button to move the cursor to the position where the character is to be input.
(7) Enter "HAPPY BIRTHDAY" using the cursor buttons and the CHARACTER SELECT "FWD", "REV" and "SPACE" buttons.



●For the order in which characters appear, refer to page 25.
(8) Press the MEMORY button to store the created titles in memory and terminate the create mode.

[Editing Example-2]
To create "WINTER HOLIDAY" (as a headline) and "SKI 1989" (to be scrolled) on the SCROLL page:

<Preparations>
Perform the operations in "Preparations" and the procedure from steps [1] to [4] in Editing Example-1.

[1] Press the SCROLL button.

[2] Set the JX-SV77 to the create mode.

[3] Determine the size of the characters, using the SIZE button. Each time the SIZE button is pressed, the character size will be changed in the following order:
Small → "Headline" → Medium → Large → Very Large → Small ....
(The number of characters per line depends on the size of the characters, refer to "Function Comparison of each Page" on page 25.)

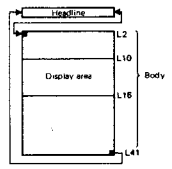
[4] Create the required title.
(1) Enter "WINTER HOLIDAY" in the headline section, using the cursor buttons and the CHARACTER SELECT "FWD", "REV" and "SPACE" buttons.
(2) Determine the position of the first character using the cursor buttons.
(Refer to the section "Cursor movement in SCROLL page".)
(3) Enter "SKI 1989" in the body section, to be scrolled, using the cursor buttons and CHARACTER SELECT "FWD", "REV" and "SPACE" buttons, as shown in the figure.

●For the order in which characters appear, refer to page 25.

[5] Press the MEMORY button to store the created title in memory and terminate the create mode.

Cursor movement in SCROLL page
The SCROLL page has two sections, the headline section and the body section as shown in the figure. The body section can be scrolled up or down while the headline section remains at the same position. The body section that appears on the screen varies depending on the size of the characters and settings.

Example: When small characters are used.



●How to move the cursor to the "Headline" section:
When the cursor is at the left of the 2nd line (L2), press the " ◀ " button; when the cursor is at the right of the 41st line (L41), press the " ▶ " button.

Notes:
●The create mode cannot be entered when the INSERT switch is set to ON.
●The title created in the headline position cannot be scrolled. When it is required to be scrolled, move it to the "body copy" area by moving the cursor.
●While creating a title, it is impossible to shift to the another page. To shift to the another page, press the MEMORY button first, to store the title that has been created.

■ How to Record Characters (Titles)

[Editing Example-1]
To record the title created in Editing Example-1 in "How to Create a Title" above using the recording VCR, fading the characters in and out:

<Preparations>
Create the title according to the procedure in Editing Example-1 in "How to Create a Title".

[1] Arrange the title as required.
Using the TITLE POSITION buttons "▲", "▼", "◀" and "▶", move title to the required position.

[2] Press the MONITOR SELECT "PROGRAM" button.

[3] Press the FADE IN/OUT button to set to FADE OUT.

[4] Locate the editing start point on the playback VCR, and set the VCR to the still mode.

[5] Set the recording VCR to the record-pause mode.

[6] Set the playback VCR to the playback mode and set the recording VCR to the record mode.

[7] When the scene at which you want to superimpose the title is reached, press the FADE IN/OUT button.

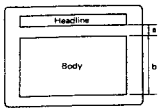
[8] When the scene at which you want to fade out the title is reached, press the FADE IN/OUT button again.

[9] After editing is finished, set the recording VCR to the record-pause mode.

[Editing Example-2]
To record the title created in Editing Example-2 in "How to Create Titles" with the recording VCR:

<Preparations>
Create the title according to the Editing Example-2 in "How to Create Titles".

[1] Set the scrolling lengths.
(1) Set the distance between the headline and the body ("a" in the figure on the right).
Press the DATE/SHIFT button and TITLE POSITION "▼" button to increase "a", or press the DATE/SHIFT button and the TITLE POSITION "▲" button to decrease "a".
(2) Set the length of the body area ("b" in the figure on the right.)
Press the DATE/SHIFT button and TITLE POSITION "◀" button to decrease "b", or press the DATE/SHIFT button and the TITLE POSITION "▶" button to increase "b".
(Initial condition "a" is minimum, "b" is maximum)



[2] Arrange the title as required.
Using the TITLE POSITION buttons, move the characters to the required position.

[3] Press the SCROLL SPEED button to set the scrolling speed (among 1 to 4 steps).

[4] Press the SCROLL START/STOP button to start title scrolling.

[5] Press the SCROLL REVERSE button two or three time to determine the best scroll start and stops positions.

[6] Press the SCROLL REVERSE button to determine the scrolling direction (either up "↑" or down "↓").

[7] Press the MONITOR SELECT "PROGRAM" button.

[8] Press the INSERT ON/OFF button to set to the INSERT OFF mode.

[9] Locate the editing start point on the playback VCR, and set the VCR to the still mode.

[10] Set the recording VCR to the record-pause mode.

[11] Set the playback VCR to the playback mode and set the recording VCR to the record mode.

[12] When the scene at which you want to superimpose the title is reached, press the INSERT ON/OFF button.

[13] Press the SCROLL START/STOP button to start scrolling the title.

[14] Press the SCROLL START/STOP button again to stop scrolling.

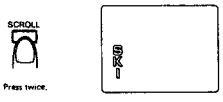
[15] Press the INSERT ON/OFF button again to set the INSERT mode OFF.

[16] After editing is finished, set the recording VCR to the record-pause mode.

■ How to Add Edges to Characters

To emphasize the characters, a black edge can be added to each white character for more effective titles.
To do this, press the PAGE button in which the required title has been stored twice in succession.
To cancel the outline, press the PAGE button a third time. Only the white characters will remain.

<Example of SCROLL page>



Order of Characters for CHARACTER SELECT buttons:

Order of Date Indication for PAGE-1:

●Day indication section:
FWD → 1, 2, 3, 4, 5, 6, ---------- 28, 29, 30, 31 → REV

●Month indication section:
FWD → JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEPOCT, NOV, DEC → REV

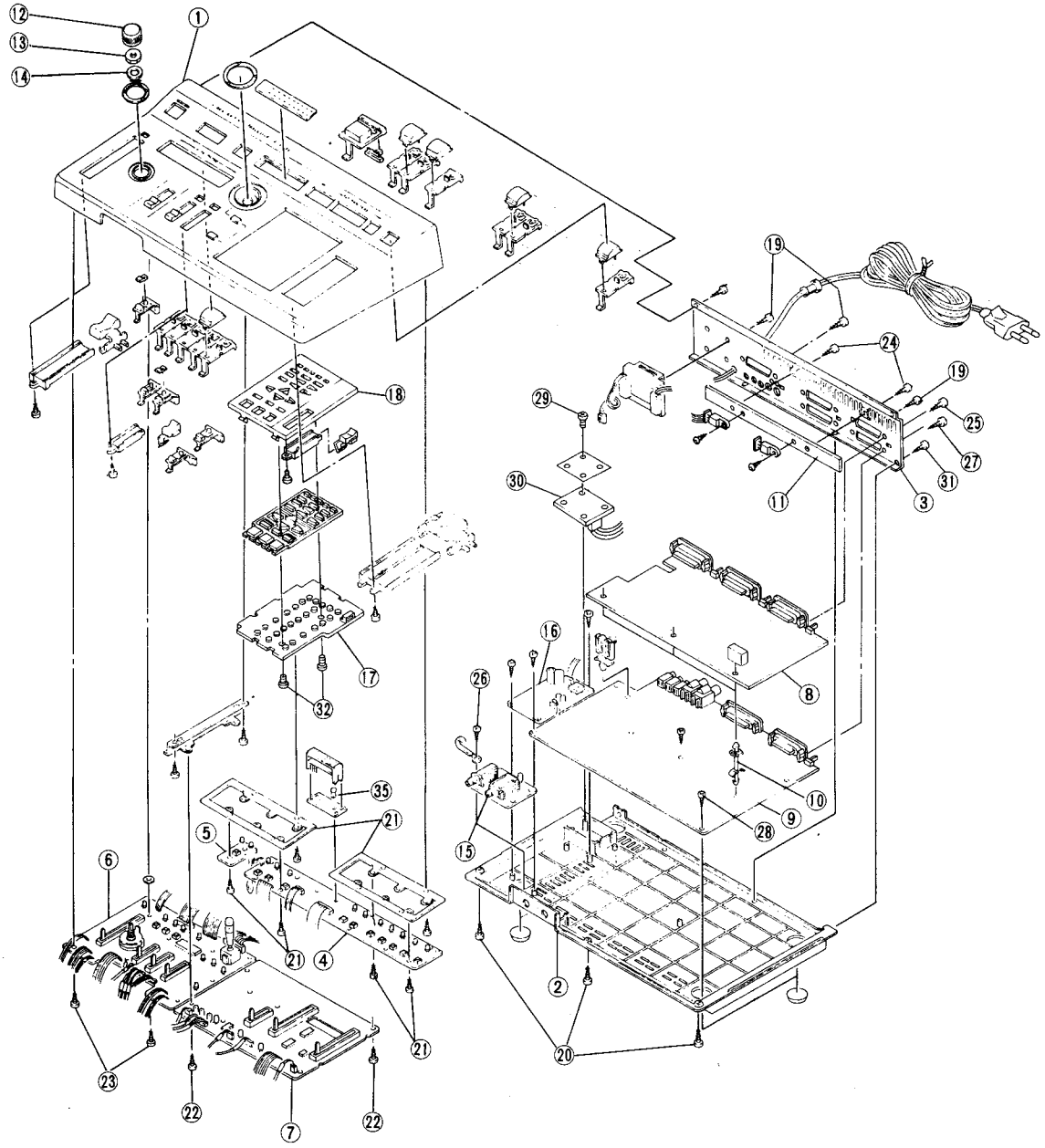
●Year indication section:
Initial value: "1900", variable from "00" to "99" by 2-digits.

Function Comparison of each Page

Function \ Page			Date page	Standard page	Scroll page
No. of pages			1	3	1
Page indication (Monitor Out only)			P1 (left above corner)	P2 ~ P4 (left above corner)	SCRL L: 1~6 ↑ S: 4
Scroll line indication			x	x	L: 1~6
Scroll speed indication			x	x	S: 1~S: 4
Scroll direction indication			x	x	↑ Upward, ↓Downward
Page recall			Page 1	Page 2 ~ 4	Page/scroll
Date indication			o (right above corner)	x	1
Character size and capacity	Small	Display	20 chars. x 8 lines	20 chars. x 9 lines	20 chars. x 8 lines
		Capacity	—	—	20 chars. x 41 lines
	Headline	Display	—	12 chars. for 1st line 20 chars. x 7 lines	12 chars. for 1st line 20 chars. for 2nd — 7th line
		Capacity	—	—	12 chars. for 1st line 20 chars. x 40 lines
	Medium	Display	—	12 chars. x 7 lines	12 chars. x 6 lines
		Capacity	—	—	12 chars. x 41 lines
	Large	Display	—	8 chars. x 5 lines	8 chars. x 4 lines
		Capacity	—	—	8 chars. x 41 lines
	Very Large	Display	—	5 chars. x 4 lines	5 chars. x 3 lines
		Capacity	—	—	5 chars. x 41 lines
Title position movement			o	o	1
Scrolling			x	x	1
Fade In/Out			o	o	1
Insert On/Off			o	o	1

o: Available
x: Not available

5. Disassembly



Note: As for the position of the connector, see p. 27.

■ How to Remove the Top Cover ①

1) Remove three screws ⑲ on the rear panel ③, which fixes the top cover ①, and remove three screws ⑳ on the chassis ②.
2) Remove the top cover ① slowly, and put it before the base plate ② while keeping it overturned.

■ How to Remove Each Control P.C. Board

Implement this after removing the Top cover ①.

1. How to Remove Control 1 P.C. Board ④
   1) Remove 12 screws ㉑, and remove Control 1 P.C. Board ④ and Power Switch P.C. Board ⑤.
   2) Remove connectors CN801, CN802 and CN806, which are on Control 1 P.C. Board ④.

2. How to Remove Control 2 P.C. Board ⑦
   1) Remove all tie band.
   2) Remove four screws ㉒, and remove Control 2 P.C. Board ⑦.
   3) Remove connectors CN807, CN808 and CN810, which are on Control 2 P.C. Board ⑦.
   4) Remove connectors CN310 and CN805, which are on control 3 P.C. Board ⑥.
   5) Remove connector CN809, which is on Jack P.C. Board ⑮.
   6) Remove connector CN811, CN812, CN814, and CN815, which are on Video P.C. Board ⑧.
3. How to Remove Control 3 P.C. Board ⑥

1) Pull out Back Color Knob ⑫.
2) Remove hexangular nut ⑬ and remove washer ⑭ as well.
3) Remove 8 screws ㉓, and remove Control 3 P.C. Board ⑥.
4) Remove connector CN3, which is on Video P.C. Board ⑧.
5) Remove connector CN804, which is on Jack P.C. Board ⑮.
6) Remove connector CN906, which is on Power Supply P.C. Board ⑯.
7) Remove connectors CN305, CN307, CN308, CN309, CN312 and CN313, which are on Main P.C. Board ⑨.

■ How to Remove Video P.C. Board ⑧

Implement after removing Top Cover ①, each Control P.C. Board.
1) Remove connectors CN301, CN303, CN314～316, CN318, CN905, which are on Video P.C. Board ⑧.
2) Remove connectors CN302, CN317, which are on Main P.C. Board ⑨.
3) Remove two screws ㉔ and remove heatsink ⑪.
4) Remove six screws ㉕.
5) Remove three locking card spacers ⑩ from Video P.C. Board ⑧.

■ How to Remove C.G. SW-P.C. Board ⑰

Implement after removing Top Cover ①, each Control P.C. Board, Video P.C. Board ⑧.
1) Remove Connector CN311, which is on Main P.C. Board ⑨.
2) Remove two screws ㉜ and remove C.G. SW-P.C. Board ⑰ from C.G. Plate ⑱.

■ How to Remove Main P.C. Board ⑨

Implement after removing Top Cover ①, each Control P.C. Board Video P.C. Board ⑧.
1) Remove two screws ㉖, and remove Jack P.C. Board ⑮.
2) Remove connector CN903, which is on Power Supply P.C. Board ⑯.
3) Remove six screws ㉗.
4) Remove four screws ㉘, and remove Main P.C. Board ⑨ from Chassis ②.

■ How to Remove Rear Panel ③

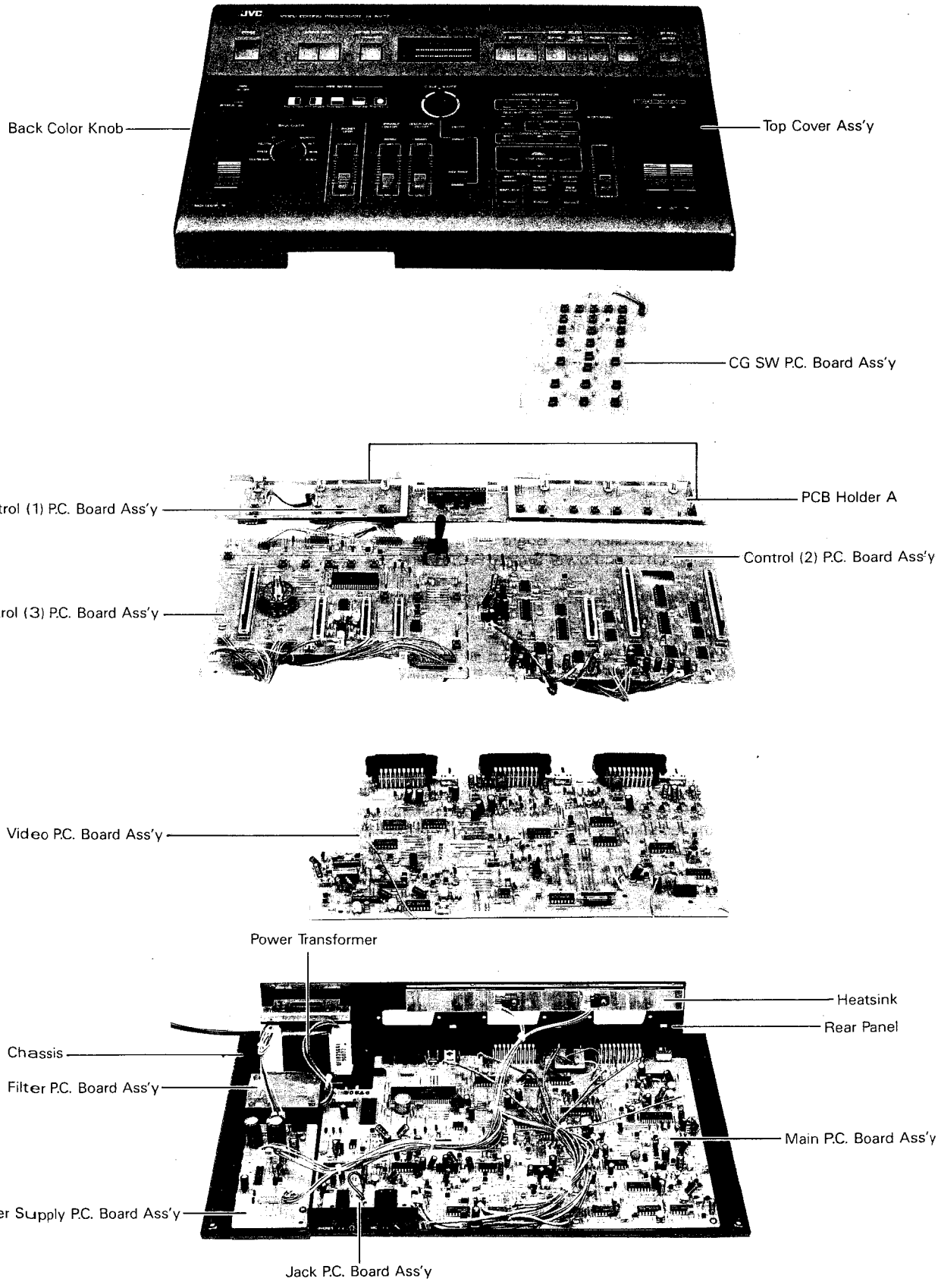
Implement after removing Top Cover ①, Video P.C. Board ⑧ and Main P.C. Board ⑨.
1) Remove connector CN902, which is on Power Supply P.C. Board ⑯.
2) Remove four screws ㉙ fastening Filter P.C. Board ㉚.
3) Remove two screws ㉛, and remove rear panel ③ from chassis ②.

Note: When you pull off the cable, pull it off while pushing the stopper of the connector.

<Cautions on Assembly>

1. When installing each control P.C. Board onto the Top cover assembly, place each LED lamp vertical to the P.C. Board.
2. To fit each slide volume to the fader knobs (high/low), be sure to make alignment before assembly by turning the slide volume to the end of either side.

6. Main Parts Locations



7. Operation

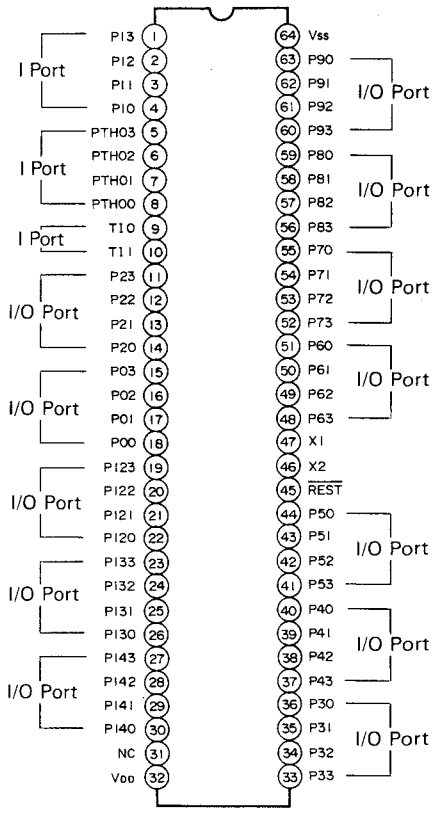
Function Key, LED		Initial Value	Function	Action to make the Key ON/OFF	Notes
POWER		OFF	• POWER ON ↔ OFF	• ON ↔ OFF	When it is OFF, all outputs are OFF, and all LED lights are OFF.
Source Selection	SOURCE 1	ON	• Select SOURCE 1 (VCR-1), and SOURCE 2 (VCR-2).	• Select 1 or 2. • ON is selected, LED turns ON.	
	SOURCE 2	OFF			
Monitor Selection	SOURCE 1	OFF	• Select output signal to monitor.	• Select one signal. • Selected signal is output to monitor and LED turns ON.	Select VCR-1 input signal.
	SOURCE 2	OFF			Select VCR-2 input signal.
	C/G PRE-VIEW	OFF			Select Character Generator drafting screen.
	PROGRAM	OFF			Select signal with Character Generator inserted (REC OUT).
	RETURN	ON			Select input signal from REC OUT/ RETURN terminal.
	AUX/MIC	OFF	• Outputs AUX or MIC input signal to monitor.	ON ↔ OFF toggling is possible when RETURN is OFF.	MIC turns ON when connected.
EDITING		OFF	• Editing control.	• START ↔ PAUSE • When Source Select button is operated PLAY ↔ STILL and REC ↔ PAUSE.	See Explanation of Editing control function on p. 22.
BY PASS		OFF	Processor function: BY PASS	• ON ↔ OFF	
WIPE	WIPER	OFF	• Wiper ON/OFF	• ON ↔ OFF	
		ON	• Select the wipe pattern. • There are 16 wipe patterns in total.	• can be turned ON/OFF in any combination. • Toggle to turn ON/OFF. • When is ON, others are all OFF.	• Each pattern key may be operated at WIPE OFF or ON.
		OFF			
		OFF			
		OFF			
		OFF			
ENHANCE		OFF	• Enhancer adjustment ON/OFF.	• ON ↔ OFF	
COLOR LEVEL		OFF	• Color level adjustment ON/OFF.	• ON ↔ OFF	
COLOR BALANCE		OFF	• Color balance adjustment ON/OFF.	• ON ↔ OFF	
WIDE		OFF	• Switches color wide range for color adjustment.	• ON ↔ OFF • Color wide range "WIDE" at ON.	

Note 1: When the POWER SUPPLY is OFF, all but POWER SUPPLY Key are invalid.
Note 2: Initial Value is the key setting of each key when main power is turned ON. The key setting is put in memory when Power Key is turned OFF and the initial value is taken when the power is turned ON again.

8. Description of Circuits

1 IC327 μPD75106CW-157
***μPD75106CW is a 4-bit microcomputer with program memory (ROM) of 6016 × 8-bit and data memory (RAM) of 320 × 4-bits.**

1) Terminal names
V_{DD}: Power supply terminal +5.0V connection
V_{SS}: Grand terminal
RESET: Reset terminal
When the power is turned on, this terminal is retained in "L" (for about 40ms) and reset is performed.
X1, X2: Terminal for connection of system clock.
This unit is connected to a liquid crystal oscillator or a ceramic oscillator.
P1, PTH, TI: Input port
P0, P2 ~ P14: Input/output port



2) Port allocation for IC327 μPD75106CW-157

Pin Name	Pin No.	Part Name	I/O	Function
P13	1	Key input	I	Key input for COLOR BALANCE, WIDE, ◧, ▬, DUBBING, MON.-SOURCE1.
P12	2			Key input for ENHANCER, COLOR, ▬, ◨, ◧, WIPE.
P11	3			Key input for MON. C/G, MON.-RETURN, SOURCE 2, MON.-SOURCE 2.
P10	4			Key input for MON.-PROG, BY-PASS, SOURCE 1, MON.-AUX/MIC.
PTH03	5			Key input for Character Generator START/STOP, SPEED, ←, →, SPACE, SIZE, PAGE 1, PAGE 2.
PTH02	6			Key input for Character Generator INSERT, REV, ↓, ↑, CHR. REV, CHR. FWD, CREATE, PAGE 3.
PTH01	7			Key input for Character Generator FADE, MEMORY, CURSOR →, CURSOR ←, CLEAR, SCROLL, PAGE 4.
PTH00	8	Y/C and Composite signal switch	I	Switches Y/C and Composite of SOURCE 1 terminal. Switches Y/C and Composite of REC. OUT/RETURN terminal.
TI0	9	H SYNC	I	Horizontal synchronizing signal input.
TI1	10	Y/C and Composite signal switch	I	Switches Y/C and Composite of SOURCE 2 terminal.
P23	11	H:SYNC Mask	O	Turns OFF H. SYNC input to IC329 (C.GIC MB89012 – 106).
P22	12	C.G Mask	O	Turns ON/OFF C.G signal input to IC330 6 pin, which passes through IC333 2 pin → 5 pin ⇨ IC330 5 pin. C.G signal is output to IC330 4 pin.

Pin Name	Pin No.	Part Name		I/O	Function
P21	13	$\overline{WE}$		O	Input to IC328 (Memory IC) 21 pin ($\overline{WE}$).
P20	14	$\overline{CS}$		O	Is inverted at Q386 and is input to IC328 (Memory IC) 18 pin.
P03	15	PAL/NTSC SW		I	Connect to ground.
P02	16	SI		O	Input to IC329 (C.G IC MB 89012−106) 17 pin (SI). Outputs serial data to control display.
P01	17	S•CLK		O	Input to IC329 (C.G IC MB89012−16) 18 pin (SLK). Outputs clock to transfer serial data.
P00	18	$\overline{V.SYNC}$		I	Vertical synchronizing signal input.
P123	19	$\overline{POWER}$		O	Outputs power ON/OFF signal, 'L' = ON.
P122	20	BALANCE		O	COLOR BALANCE ON/OFF. 'H' = ON.
P121	21	WIDE		O	COLOR BALANCE WIDE function ON/OFF. 'H' = ON.
P120	22	COLOR		O	COLOR LEVEL Adjustment ON/OFF. 'H' = ON.
P133	23	$\overline{ENHANCE}$		O	ENHANCE ON/OFF. 'L' = ON.
P132	24	WIPE Pattern Switch	$\overline{3\oplus4}$	O	When one of the patterns of 3 or 4 is ON, this is "L".
P131	25		$\overline{5}$		When the pattern 5 is ON, this is "L".
P130	26		$\overline{3*4}$		When the patterns of 3 and 4 at the same time, this is "L".
P143	27		$\overline{1*2}$		When the patterns of 1 and 2 at the same time, this is "L".
P142	28		$\overline{1\oplus2}$		When one of the patterns of 1 or 2 is ON, this is "L".
P141	29		1+2		When any of the patterns of 1 or 2 is ON, this is "H".
P140	30		3+4+5		When one of the patterns of 3, 4 and 5 is ON, this is "H".
NC	31			−	5V
V_{DD}	32			−	5V
P33	33	EXP.STD		O	Input to IC801 M50780SP 6 pin (STD Strobe pin).
P32 ~P30	34	RAM Address	A10	O	Address control of IC328 (Memory IC BR6116−100). (Note) 37−40 pins are connected to IC801 M50780SP R3-R0 (37−40 pin).
	35		A9		
	36		A8		
P43 ~P40	37		A7		
	38		A6		
	39		A5		
	40		A4		
P53 ~P50	41		A3		
	42		A2		
	43		A1		
	44		A0		

- The numbers written on the left (3⊕4 etc.) show the switch operation of the wipe pattern in the above pictures.
- When the wipe (SW815) is OFF, all pins will become "L".

Pin Name	Pin No.	Part Name	I/O	Function
REST	45	REST	I	Reset input.
X1	46		—	System clock oscillating terminal.
X2	47			
P63	48	EDITING CONTROL	O	Outputs editing control signal for REC VCR.
P62	49			Outputs editing control signal for playback VCR connected to SOURCE 1.
P61	50			Outputs editing control signal for playback VCR connected to SOURCE 2.
P60	51		—	Not used.
P73	52	FADE OUT	O	Controls Fade IN/OUT of character generator.
P72	53	C.G ON	O	Turns character generator ON.
P71	54	$\overline{\text{C.G. OFF}}$	O	Turns character generator OFF.
P70	55	$\overline{\text{CS}}$	O	Chip-Select for IC329 (C.G IC)
P83 ~ P80	56	RAM Data D_0	I/O	Data input/output for IC328 (Memory IC BR 6116—100)
	57	D_1		
	58	D_2		
	59	D_3		
P93 ~ P90	60	D_4		
	61	D_5		
	62	D_6		
	63	D_7		
V_{SS}	64	V_{SS}	—	Ground.

Pin	IN	OUT	ON	OFF
52	H	L	L	L
53	L	L	H	L
54	H	H	H	L
55	H	H	H	H

2 IC801 M50780SP

***Connected to 4-bit microcomputer IC327 (μPD75106CW-157). May have a maximum of 32 input output ports.**

Port allocation for IC801 M50780SP

<table>
<tr><th>Pin No.</th><th>Part Name</th><th>Function</th></tr>
<tr><td>1</td><td>V_{DD}</td><td>Connects to +6V.</td></tr>
<tr><td>39</td><td>R0</td><td rowspan="4">Data input.
Connects to IC327 μPD75106CW−157 37−40 pin.</td></tr>
<tr><td>40</td><td>R1</td></tr>
<tr><td>2</td><td>R2</td></tr>
<tr><td>3</td><td>R3</td></tr>
<tr><td>35</td><td>S0</td><td rowspan="3">Port-Select
Connects to IC327 μPD75106CW-157 42−44 pin.
Selects port to set R3−R0 data.</td></tr>
<tr><td>36</td><td>S1</td></tr>
<tr><td>37</td><td>S2</td></tr>
<tr><td>6</td><td>STD</td><td>Strobe input
Connects to IC327 μPD75106CW-157 33 pin.</td></tr>
<tr><td>7</td><td>$\overline{\text{RETURN}}$</td><td>Monitor Select RETURN ON/OFF. ON at 'L', LED lit.</td></tr>
<tr><td>8</td><td>$\overline{\text{SOURCE 2}}$</td><td>Monitor Select SOURCE 2 ON/OFF. ON at 'L', LED lit.</td></tr>
<tr><td>9</td><td>$\overline{\text{SOURCE 1}}$</td><td>Monitor Select SOURCE 1 ON/OFF. ON at 'L', LED lit.</td></tr>
<tr><td>10</td><td>—</td><td></td></tr>
<tr><td>11</td><td>A</td><td rowspan="3">Switches Audio Monitor-Select by IC809, 817 (TC4052BP) (Refer to Logic Truth Table of Separate-Volume Insertion)
<table>
<tr><th></th><th>SOURCE 1</th><th>SOURCE 2</th><th>AUX/MIC</th><th>PRE/PRO</th><th>RETURN</th></tr>
<tr><td>A</td><td>L</td><td>H</td><td>H</td><td>L</td><td>L</td></tr>
<tr><td>B</td><td>L</td><td>L</td><td>L</td><td>H</td><td>L</td></tr>
<tr><td>C</td><td>L</td><td>L</td><td>H</td><td>L</td><td>H</td></tr>
</table></td></tr>
<tr><td>12</td><td>B</td></tr>
<tr><td>13</td><td>C</td></tr>
<tr><td>14</td><td>MUTE</td><td>Mutes audio output just prior to turning POWER ON/OFF.</td></tr>
<tr><td>15</td><td>$\overline{\text{ENHANCE}}$</td><td>ENHANCE LED ON/OFF. ON at 'L' (Lit).</td></tr>
<tr><td>16</td><td>$\overline{\text{COLOR}}$</td><td>COLOR LED ON/OFF. ON at 'L' (Lit).</td></tr>
<tr><td>17</td><td>Y1</td><td rowspan="2">Switches input pin Y/C and Composite.
(Refer to Logic Truth Table of Separate-Volume Insertion)
<table>
<tr><th>Input Side SW</th><th>Output Side SW</th><th>Y1</th><th>Y2</th></tr>
<tr><td>Y/C</td><td>Y/C</td><td>H</td><td>H</td></tr>
<tr><td>Y/C</td><td>Composite</td><td>H</td><td>L</td></tr>
<tr><td>Composite</td><td>Y/C</td><td>L</td><td>H</td></tr>
<tr><td>Composite</td><td>Composite</td><td>H</td><td>H</td></tr>
</table></td></tr>
<tr><td>18</td><td>Y2</td></tr>
<tr><td>19</td><td>$\overline{\text{WIDE}}$</td><td>COLOR BALANCE WIDE LED ON/OFF. ON at 'L' (Lit).</td></tr>
</table>

Pin No.	Part Name	Function
20	$\overline{\text{COLOR BALANCE}}$	COLOR BALANCE LED ON/OFF. ON at 'L' (Lit).
21	$\overline{\text{AUX/MIC}}$	Monitor Select AUX/MIC LED ON/OFF. ON at 'L' (Lit).
22	INPUT S/V	
23	$\overline{\text{C.G PRE-VIEW}}$	Monitor Select C.G PRE-VIEW ON/OFF. ON at 'L', LED lit.
24	$\overline{\text{PROGRAM}}$	Monitor Select PROGRAM ON/OFF. ON at 'L', LED lit.
25	$\overline{\text{BY-PASS}}$	BY-PASS ON/OFF. ON at 'L', LED lit.
26	$\overline{\text{DUBBING}}$	DUBBING LED ON/OFF. ON at 'L', LED lit.
27	$\overline{\text{SOURCE 2}}$	Source Select SOURCE 2 ON/OFF. ON at 'L', LED lit.
28	$\overline{\text{SOURCE 1}}$	Source Select SOUCE 1 ON/OFF. ON at 'L', LED lit.
29		WIPE pattern LED ON/OFF. ON at 'L' (Lit).
30		WIPE pattern LED ON/OFF. ON at 'L' (Lit).
31		WIPE pattern ON/OFF, LED ON/OFF. ON at 'L', LED lit.
32		WIPE pattern LED ON/OFF. ON at 'L' (Lit).
33		WIPE pattern ON/OFF, LED ON/OFF. ON at 'L', LED lit.
34	WIPE	WIPE LED ON/OFF. ON at 'L' (Lit).
38	V_{SS}	Ground.

3 IC329 MB89012-106

***Display Controller IC connected to 4-bit microcomputer IC327 (μPD75106CW-157) which displays character and shapes on TV monitor.**

Pin No.	Part Name	I/O	Function
8	EX	I	Dot clock generator external circuit terminal.
7	X	O	
21	$\overline{\text{RESET}}$	I	Resets vertical and horizontal position, character size and screen control when set at 'L'.
5	$\overline{\text{H SYNC}}$	I	Horizontal synchronizing signal input.
6	$\overline{\text{V SYNC}}$	I	Vertical synchronizing signal input.
19	$\overline{\text{CS}}$	I	Chip Select terminal. Set at LOW level when transferring serial data.
17	SI	I	Serial data input terminal for display control.
18	S CLK	I	Shift clock input terminal for serial transfer.
14	R OUT	O	Outputs character signal by controlling display memory color code. Not used.
15	G OUT	O	
16	B OUT	O	
3	VOC	O	Character signal output terminal.
4	$\overline{\text{VOB}}$	O	Outline or back ground signal output terminal.

4 Explanation of Editing Control

This will send out signals to control each mode changeover of PLAY/STILL, REC/PAUSE of VCR for the use of Play and REC connected with editing control terminal through ON/OFF of Control Key.

1) Control Conditions

(1) Applicable VCRs both to recording and playback:

HR-S5500, S5000, D950, D830, D750, D700, D620, D530, D521, D520, D440

(JVC VCR equipped with REMOTE PAUSE terminal and preroll function as well.)

Applicable VCRs only for recording:

HR-D430, D370, D330, D230, D227, D190, D180

(JVC VCR equipped with REMOTE PAUSE terminal.)

For details, consult JVC's retailers or JVC's service contacts.

(2) Control mode is removed through Source Select change. (All "H")

PLAY ➡ STILL REC ➡ PAUSE

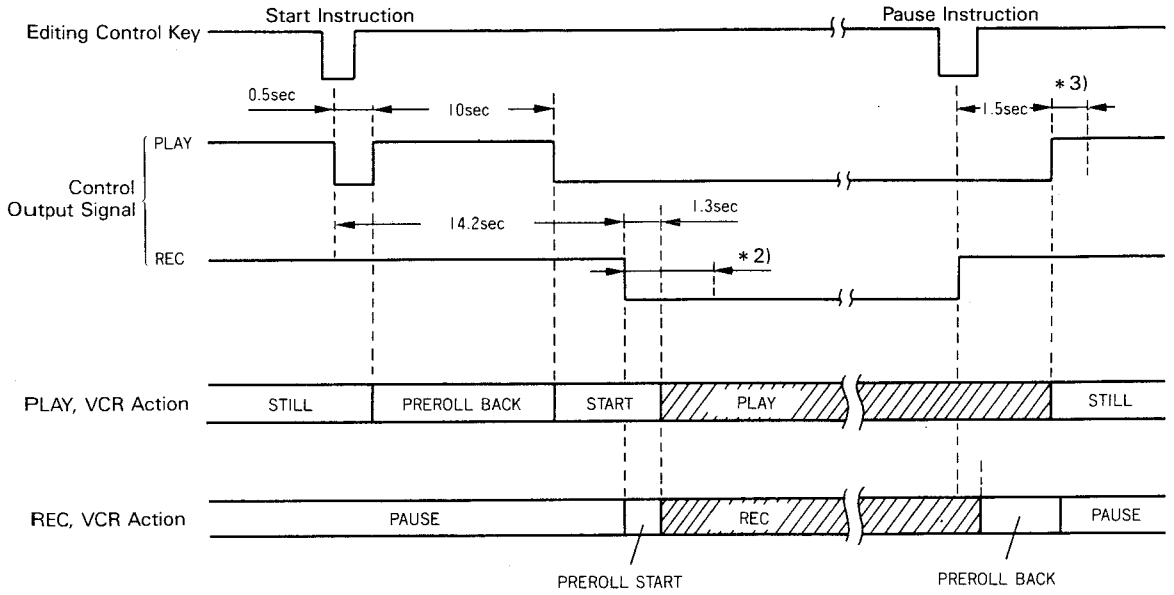
(3) It will return to Initial State immediately by turning power source to OFF. (PAUSE, STILL state)

(4) Control will be possible only by setting in advance the VCR on the PLAY side to STILL state, or the VCR of the REC side to PAUSE state in advance by operating.

2) Connection and Functions

Connecting VCR (remote pose terminal)	Control Terminal	Control Function
VCR of SOURCE-1	PLAY-1	STILL/PLAY
VCR of SOURCE-2	PLAY-2	STILL/PLAY
VCR of REC OUT	REC	PAUSE/REC

3) Output Signal and the State of VCR Being in Action



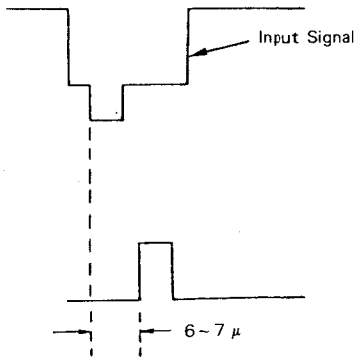
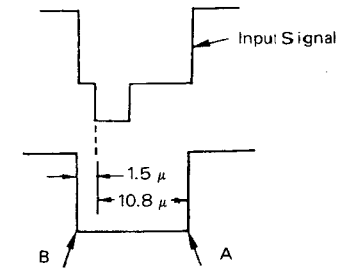
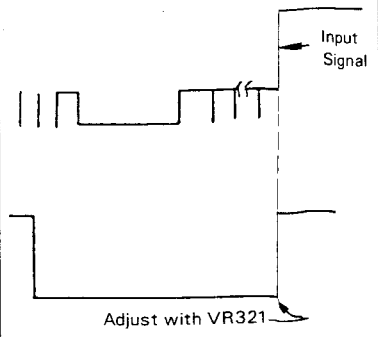
*1) Output to the VCR on PLAY side on the side not selected in Source Select should be always "H".
*2) For 3 sec. it will not turn to "H", even if you may push control Key.
*3) For 0.5 sec. it will not turn to "L", even if you may push control Key.

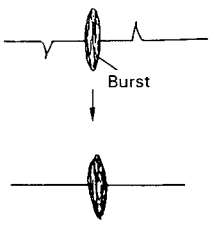
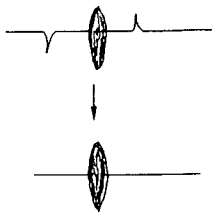
9. Adjustment Procedure

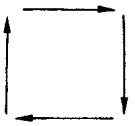
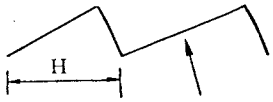
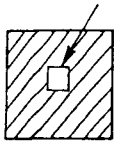
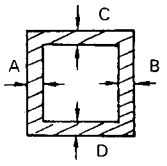
Note: When you adjust, you can do all adjustment in the indicated state in "How to Remove Top Cover ①", 1) to 2), in "Disassembly".
See the Arrangement Plan of the places for adjustment.

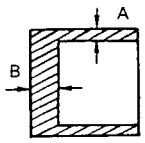
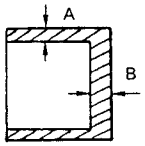
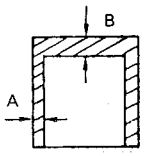
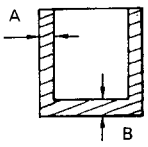
[1] Measurement Tools Necessary for Measurement
① Oscilloscope
② Color Bar Transmitter (PAL)
③ Frequency Indicator
④ Vector Scope

[2] Input Signal: PAL Standard Color Bar Signal 1 Vp-p (75 ohms) Cross Hatch Signal
Video Fade VR: Source Side
Color VR: MIN
Wipe VR: Source Side

	Test Points	Adjusting Point	Name	Conditions	Measurement
1	TP307 (Frequency)	VR-346	H-OSC	• Signal: No signal	Adjust to 15.625 kHz ± 50 Hz
2	TP301 (Oscilloscope)	VR322	BURST Position	• Signal: white	
3	TP302 (Oscilloscope)	VR324 VR323	H-BL	• Signal: White	 A: Adjust with VR324. B: Adjust with VR323.
4	TP303 (Oscilloscope)	VR321	V-BL	• Signal: Color Bar	

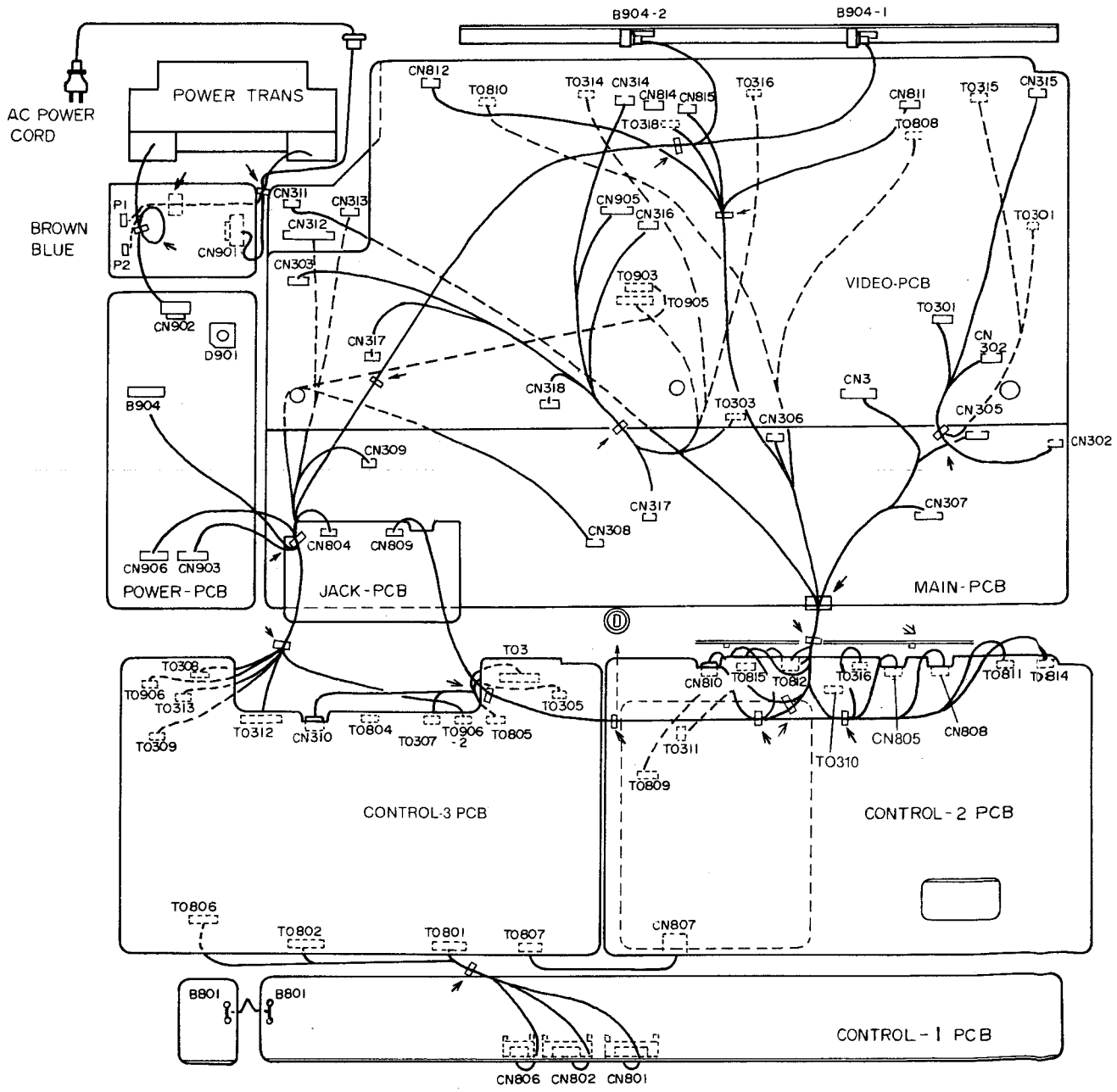
	Test Points	Adjusting Point	Name	Conditions	Measurement
5	IC301-22 (Frequency)	C312	Chroma Free Run Frequency	• Signal: B/W Signal • Back: Black • Balance: ON • Pull out CN303-1 • By Pass: OFF	• Adjust to 4.43361875 MHz
6	REC-C (Oscilloscope)	VR317 VR318	Carrier Leak	• Signal: Cross Hatch • Insert CN303-1 • V-FADE: Source Side	Make Carrier Leak to the minimum.
7	REC-C (Oscilloscope)	VR303 VR308		• V-FADE: Back Side • Back: White	Make Carrier Leak to the minimum. Repeat Item 6 and 7 until level becomes the smallest.
8	REC-Y (Oscilloscope)	VR320	Source Back Y Offset	• Signal: Color Bar • Back: Black • V-FADE: Back Side	• Adjust pedestal section.
		VR319	Source Back Y		Set Video signal components at minimum
9	REC-Y (Oscilloscope)	VR343	Source Y Level	• Signal: Color Bar • V-FADE: Source Side	• Adjust to 1Vp-p.
10	REC-Y (Oscilloscope)	VR314	Back Source Y Level	• Back Color: Color Bar • V-FADE: Back Side	 830mVp-p
11	REC-Y (Oscilloscope)	VR312	Back-Y Offset	• Signal: Color Bar • Back: Black • Wipe: All on Back Side • V-FADE: Source Side	• Adjust pedestal section.
12	REC-Y (Oscilloscope)	VR313	Back-Y Level	• Back: Color Bar • Other Items: the same as in Item 11.	 830mVp-p
13	REC-C (Oscilloscope)	VR301	Burst Level	• Signal: Color Bar • Color: OFF • V-FADE: Source Side	• Adjust to 0.3 mVp-p
14	REC-C (Oscilloscope)	VR3	Chroma Level	• Same as in the previous item.	• Adjust to 664 mVp-p
15	REC-C (Oscilloscope)	VR316	Chroma Offset	• Signal: Color Bar • Color: ON • Color Level: MIN • V-FADE: Source side • Back: Black	 Burst
16	REC-C (Oscilloscope)	VR309	Chroma Offset	• Signal: Color Bar • Back: Black • V-FADE: Back Side • Color: OFF	

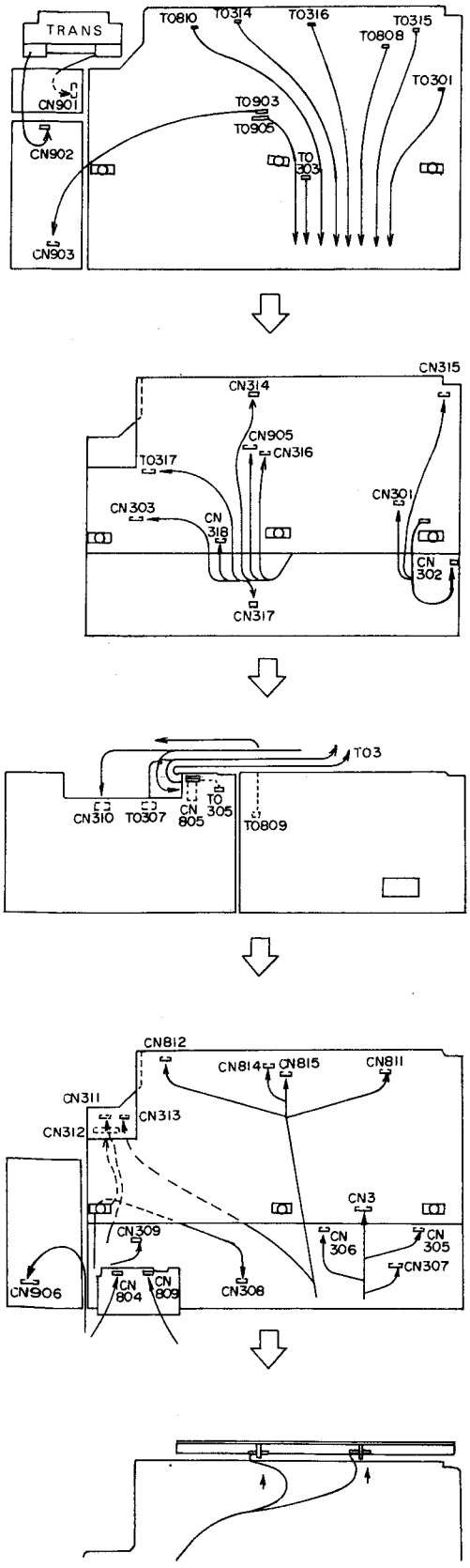
	Test Points	Adjusting Point	Name	Conditions	Measurement
17	REC-V (Vector)	VR302	Back Color Phase	• Signal: Color Bar • Back Color: Color Bar • V-FADE: Back Side	• Adjust the phase to a value within ±2.5° by using a vectorscope.
		VR307	Back Color Level		• 664 mVp-p (REC-C)
		VR315	Back Color R Level		
18	REC-V (Vector)	VR305	Back Phase	• Signal: Color Bar • Back Color: Color Bar • Wipe: All Back	• Adjust the phase to a value within ±2.5° by using a vectorscope.
		VR306	Back Level		• 664 mVp-p (REC-C)
19	REC-V (Vector)	VR344	Balance Phase	• Signal: white (with Burst) • Color: ON • Wide Range: ON • Balance: ON	 Make the movement of Vector become like the above manner. (moves in a square).
20	MON-Y (Oscilloscope)	C10	Chroma Trap	• Signal: Color Bar	Make Chroma the minimum.
21	TP304 Q343-E	VR339	H ST LIN	• Mode: Wipe • Wipe Pattern: Circle • Signal: Cross Hatch	 Make it linear
	TP305 Q335-E	VR332	V ST LIN		 Make it linear
	Monitor TV	VR334 VR327	PAL-BAL H-CENTER		Adjust the center of the circle to the center of the scope. (H direction)
	Monitor TV	VR326	V-CENTER		Adjust the center of the circle to the center of the scope. (V direction)
22	TP306 IC322 – 9	VR336	HTA-LEV	• Wipe Patterns: H Horizontal direction V vertical direction	 Make it linear
	TP306 IC322 – 9	VR337	HTA-LIN		• Adjust to 1.3Vp-p • Make it linear
	Monitor TV	VR329 VR328 VR331 VR337 VR330	VTA HALF HTA HALF VTA-LEV HTA-LIN VTA-LIN		Adjust with the center of the scope.   A ≒ B VR337 C ≒ D VR330 (Adjust with the first one from the outside of Cross Hatch). • Adjust as indicated in the above in operating Wipe Volume.

	Test Points	Adjusting Point	Name	Conditions	Measurement
22	Monitor TV	VR338	HST LEV	Wipe Pattern: H Horizontal direction V Vertical direction	 Adjust A with the first one of Cross Hatch by Wipe VR, and adjust B with No. 2.5 of Cross Hatch by VR338. Standard: 2.5 ±0.5
		VR335	H BAL		 Adjust A with the first one of Cross Hatch by Wipe VR, and adjust B with No. 2.5 of Cross Hatch by VR335. Standard: 2.5 ±0.5
		VR333	VST-LEV		 Adjust A with the first one of Cross Hatch by Wipe VR, and adjust B with No. 1.5 of Cross Hatch by VR333. Standard: 1.5 ±0.5
		VR340	V-BAL		 Adjust A with the first one of Cross Hatch by Wipe VR, and adjust B with No. 1.5 of Cross Hatch by VR340. Standard: 1.5 ±0.5
23	Monitor-Y (Oscilloscope, Monitor TV)	VR-1 VR-2	CG level (PRE-VIEW)	• Signal..... Color bar • MON Select ..... PRE-VIEW • Monitor Output Select SW ..... Y/C side • Outputs 4 maximum size outlined character "A" and puts in memory.	• At VR-2, character signal white level is set at 100%. • At VR-1, character signal outline is set to match black signal level. (At a position 100mV from the pedestal)
		VR-4		• Monitor Output Select SW..... COMPOSITE side	• Sag (character) is set at MIN. • Adjust the waveform blur of the source section so that it becomes minimal.
		VR-5 VR-6	CG level (PROGRAM)	• MON Select ..... PROGRAM • MONITOR Output Select SW ..... Y/C side • Outputs 4 maximum size outlined character A and puts in memory.	• At VR-6, character signal white level is set at 100%. • At VR-5, character signal outline is set to match black signal level. (At a position 100mV from the pedestal)

10. Wiring Diagram

Notes: 1. Arrow mark is the wire cramp position with tie band. (18 places in total).
2. TO and B are not connectors. So you cannot take them away.
3. After connection, fair the wire by seeing the diagram below.





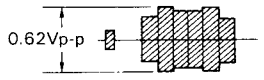
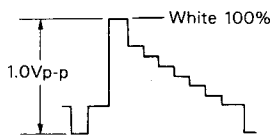
How to install connectors

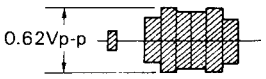
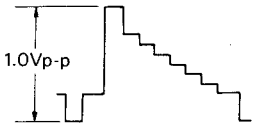
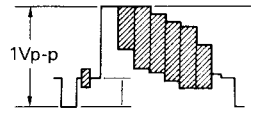
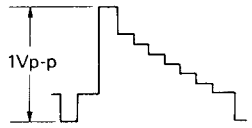
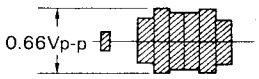
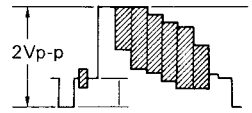
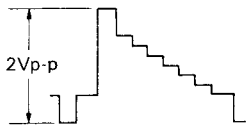
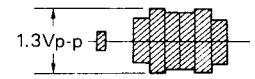
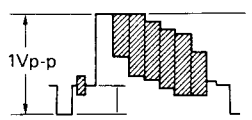
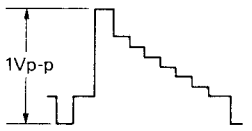
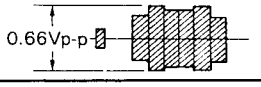
1. 1) With MAIN PCB, POWER PCB, FILTER PCB AND TRANS connected
   2) Insert CN901
   3) Insert CN902
   4) Insert CN903 (position outside of post)
   5) Pull out remaining wire toward you from between posts.
2. All connectors except for CN302 are connected from Main P.C. Board to Video P.C. Board (down → up).
   1) Insert CN301
   2) Insert CN302
   3) Insert CN315
   4) Insert CN316
   5) Insert CN905
   6) Insert CN314
   7) Insert CN318
   8) Insert CN317
   9) Insert CN303
3. 1) Insert CN310
   2) Insert CN805
   3) Pull out WIRE 809 to left.
   4) Pull out WIRE 3, 305 and 805 to right. (Hang wires on P.C. Board notch.)
4. 1) Insert CN307,305, 306, 3
   2) Insert CN811, 812, 814, 815
   3) Insert CN308, 309, 804, 809, 906
   4) Insert CN311, 312, 313 (Wires must pass under Video P.C. Board and between posts)
   5) Insert CN801, 802, 806, 807
5. 1) Pass WIRE B904-1, B904-2 over Video P.C. Board and tighten screw to secure each transistor to radiator.

Notes:
1. When securing top cover to chassis with screw, make sure that wire is not caught by chassis boss, rib.
2. Position wire with clamp and make sure that wires do not touch D901.
3. Clamp 17 points.

11. Troubleshooting

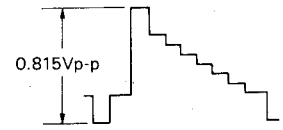
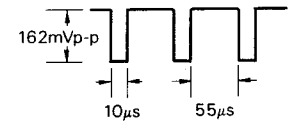
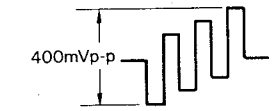
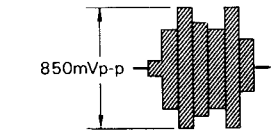
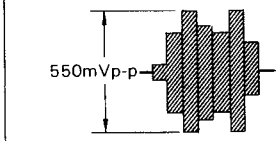
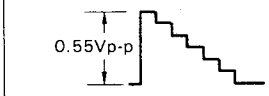
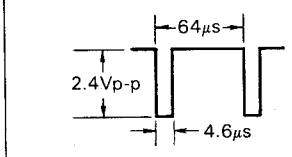
1. Standard Input Signal: Video ➡ Full Field Color Bar (White 100%) 1.0Vp-p Brightness (Y) ➡ 1.0Vp-p (with synchronous idle)
   Chroma (C) ➡ Burst Level 0.3 Vp-p
   Audio ➡ 1kHz – 10dBV sine wave
2. YES ➡Normal NO ➡ It is when voltage and waveforms are not displayed.
3. Arrangement Plan of IC and Adjustment Points See Page 52 ~ 53.
4. As for "adjustment" in each column, see the "Adjustment Procedure" on 23 ~ 26.

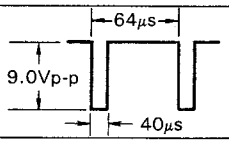
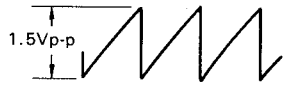
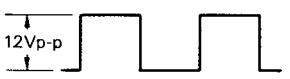
Symptoms	Check Point		Normal Voltage and Waveform	Check Point and Defect
1. Power supply does not turn on.	①	Second side of the power transformer	AC 8.7V between center taps	NO: Breaking of wire in power cord or in power transformer; breaking of thermal fuse in power transformer due to failure of Q901, 902, D901, or IC901. YES: Check ②.
	②	CN903 1 pin	DC + 6V	NO: Failure of Q901, 902, D901, or IC901; + and – power supply line pattern and soldering touch; or breaking of pattern and wire between second side of the power transformer CN902 and CN903 1 pin. YES: Check ③.
	③	IC 327 31 pin 32 pin.	DC + 5V	NO: Failure of IC902 Breaking of pattern and wire between CN903 5 pin and test point; inferior soldering. YES: Check ④.
	④	IC327 19 Pin	Power supply When ON 0V When OFF 65V	NO: Failure of IC327. YES: Failure of parts between test point and Q903; breaking of pattern and wire; imperfect contact of the connector. Failure of Q903, and IC901.
2. When power supply is ON, it does not turn to initialization.	⑤	IN327 45 pin (Confirmation of microcomputer Re-Set)	DC + 5V	NO: Failure of IC902, IC335, and their surrounding circuits; failure of the pattern, or soldering between Q360 corrector and test point. YES: Failure of IC327.
3. Output does not come out in every terminal of image output.	⑥	To 903 1 Pin 3 Pin	1 Pin + 6V 3 Pin – 6V	NO: Breaking of pattern, connectors, or wire, failure of soldering between test points from CN903. YES: Check ⑦.
	⑦	CN301 2 Pin (C) CN302 2 Pin (Y)	CN301 2 Pin (C)  CN302 2 Pin (Y) 	NO: Failure of IC3, IC4, or breaking of power supply line to each IC. Breaking of pattern and wire, failure of soldering between IC3, IC4, and CN301, CN302. YES: Check ⑧.

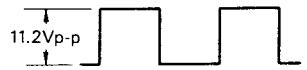
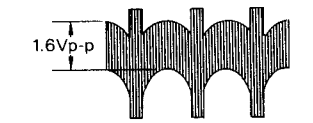
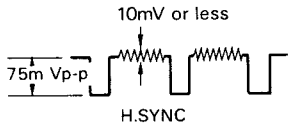
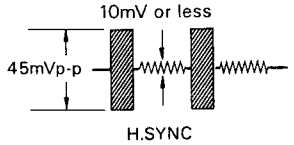
Symptom	Check Point		Normal Voltage and Waveform	Check Point and Defect
	⑧	CN303 2 Pin 4 Pin	CN303 2 Pin (C)  CN303 4 Pin (Y) 	NO: Breaking of pattern of the power supply line on the main P.C. Board. Imperfect contact of CN905, 1 pin +6V, 3 pin-6V. Imperfect contact, breaking of wire in CN903 connector. YES: (C) Inferiority of parts between CN303 and Q27, breaking of pattern, inferiority of the surrounding circuits. (Y) Check inferiority of parts between CN303 and Q38; breaking of pattern; the surrounding circuit.
4. Monitor terminal does not produce imge output. (Both video and Y/C)	⑨	(Y/V) Q19 Base (C) Q18 Base	(V) 	NO: (Y/V) Failure of IC1, IC1 control system (check against "Logic Truth Tables"). (C) Failure of IC2, failure of control system (Check against "Logic Truth Tables"). YES: Check ⑩
	⑩	(Y/V) IC13, 1 Pin (C) IC12, 1 Pin	(Y)  (C) 	NO: (V) Check parts between IC1, 9 Pin and test point; breaking of pattern; failure of soldering. Failure of IC1, failure of control system (check against "Logic Truth Tables"). (Y) Check parts between Q19 Base and test point; breaking of pattern; soldering inferior. (C) Check parts between Q18 Base and test point; breaking of pattern; soldering inferior. YES: IC12, IC13 inferior. Check of the surrounding circuits. Failure of control systems of IC12, IC13 (Check against "Logic Truth Tables") Check ⑪.
	⑪	(Y/V) Q42 Base	(V)  (Y) 	NO: Check parts between IC13, 2 Pin and test point; breaking of pattern; soldering inferior. Check the surounding circuits. YES: Check parts between test point and output terminal; breaking of pattern; soldering inferior. Check Q41, Q42, the surrounding circuits.
5. Monitor output terminal does not produce color. (C output only)	⑫	Q44 corrector		NO: Check parts between IC12, 2 pin and test point; breaking of pattern; soldering inferior. Failure of IC12, failure of control signal system (check against "Logic Truth Tables"). YES: Check parts between test point and output terminal; breaking of pattern, soldering inferior. Failure of IC14, failure of control signal system (Check against "Logic Truth Tables").
6. All REC terminals do not produce image signal. REC (Y/C), REC/RETURN (Both video and Y/C)	⑬	(Y/V) Q7 Base (C) Q13 Base	(V)  (Y)  (C) 	NO: (Y/V) Failure of IC4, failure of control signal system (check against "Logic Truth Tables"). (C) Failure of IC3, failure of control signal system (Check againt "Logic Truth Tables"). YES: Check ⑭.

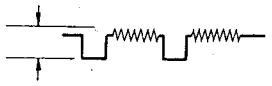
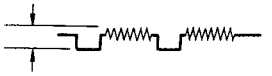
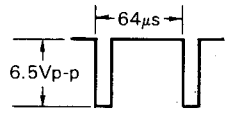
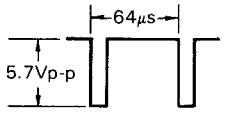
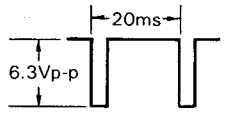
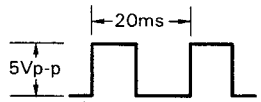
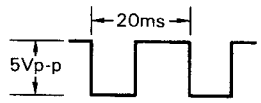
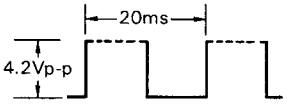
Symptom	Check Point		Normal Voltage and Waveform	Check Point and Defect
	⑭	(Y/V) Q12 Base (C) Q56 Base		NO: (Y/V) Check parts between Q7 Base and test point; breaking of pattern; soldering inferior. Failure of IC4, failure of control signal system (Check against "Logic Truth Tables") (C) Check parts between Q13 Base and test point; breaking of pattern; soldering inferior. Check the surounding circuits. YES: (Y/V) Check parts between Q12 Base and Q53 Emitter; breaking of pattern; soldering inferior; surrounding circuits. (C) Check parts between Q13 Base and Q57 Emitter; breaking of pattern; soldering; surrounding circuits.
7. No image signal output only at REC. (Y/C)	⑮	(Y/V) Q54, 55 Emitter (C) Q66 Emitter	(V) 2Vp-p (Y) 1Vp-p (C) 1.3Vp-p	NO: (Y/V)Check parts between Q53 Emitter and test point; breaking of pattern; soldering inferior. (C) Check parts between Q57 Emitter and test point; breaking of pattern; soldering inferior. YES: Check parts between test point and output terminal; connector CN316; breaking of pattern; soldering inferior.
8. No image signal output only at REC/ RETURN.	⑯	IC5, 8 pin, 10 pin.	1Vp-p	NO: Parts between IC4, 4 Pin, 9 Pin and Q14, IC5, test point inferior; breaking of pattern; failure of soldeing. Failure of control signal system of IC4, IC5. (Check against "Logic Truth Tables") YES: Check parts between test point and output terminal 19 Pin; breaking of pattern; soldeing inferior.
No output only at BY-PASS OFF.	⑰	IC5, 9 Pin		NO: Check Q53, Q57, R173, R183; parts between test points; breaking of pattern; soldering inferior. YES: Parts between IC5, IC5, 8 Pin and Q48 Base inferior; breaking of pattern; soldering inferior. Failure of control signal system of IC5 (Check against "Logic Truth Tables")
9. No image signal input to some CH.	⑱	IC / Pin SOURCE 1 (Y/V) 4 / 3 (C) 3 / 3 SOURCE 2 (Y/V) 4 / 1 (C) 3 / 1	(V) 1Vp-p (Y) 1Vp-p (C) 0.66Vp-p	NO: Check parts between each input terminal and test point; breaking of pattern; soldering inferior; surrounding circuits of each input buffer amplifier. YES: Failure of IC3, IC4; check control signal system, IC801, CN3, IC6 inferior, checking connectors between each gate IC3, IC4; breaking of pattern; soldering inferior. (Check against "Logic Truth Tables")

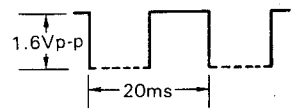
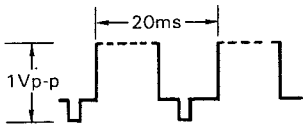
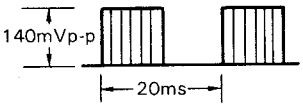
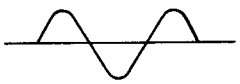
Symptom	Check Point		Normal Voltage and Waveform	Check Point and Defect
10. Some CH canot MONIROR SELECT image signal.	⑲	IC / Pin SOURCE 1 (Y/V) 1 / 11 (C) 2 / 11 SOURCE 2 (Y/V) 1 / 1 (C) 2 / 1 C/G PRE.-VIEW (Y/V) 13 / 9 (C) 12 / 9 PROGRAM (Y/V) 13 / 11 (C) 12 / 11 RETURN (Y/V) 1 / 3 (C) 2 / 3		NO: Check parts between each input terminal and test point; breaking of pattern; soldering inferior. In case of C/G PRE-VIEW (Y/V) between 32 Emitter and test point (C) between Q28 Emitter and test point. In case of PROGRAM (Y/C) between Q38 Emitter and test point. (C) between Q27 Emitter and test point. YES: Each test point IC inferior Failure of control signal system. (Check against "Logic Truth Tables")
11. When color level is ON, chroma output does not come out, or level is inferior.	⑳	IC301 3 Pin	(C) 0.236Vp-p	NO: Pattern, soldering inferior between CN307, 2 pin and IC301, 5 pin. IC301 inferior. YES: Check ㉑.
	㉑	IC307 7 Pin	Color Level VR MIN 0.6Vp-p	NO: IC307 inferior, checking the voltage of surrounding circuits. Parts, pattern, soldering between IC310 13 pin and IC327 22 pin inferior. Check parts, pattern, soldering between VR806, CN805 5 pin, CN306 1 pin, IC307 3 pin. YES: Check ㉒.
12. When color balance is ON, balance adjustment does not work.	㉒	Q321 Base	98mVp-p Color balance VR MAX	NO: Parts between CN302, 2 pin and test point is inferior; breaking of pattern; soldering inferior. Q321 inferior; checking the surrounding circuits pattern soldering inferior between Q321 base and Q363 emitter. Check ㉔. YES: Check ㉓.
	㉓	IC301 15 Pin 17 Pin		NO: Breaking of wire in imperfect contact of CN305 connector. Breaking of pattern, soldering inferior between CN305 and color balance VR. IC308, 1 pin, 3 pin cramp output is inferior. See "Adjustment Procedure" NO. ⑥. Q301, Q302 inferior; checking the surrounding circuits. YES: IC301 inferior (part of encoder)
	㉔	Q363 Base	Color Balance ON DC – 6V OFF DC + 0.6V	NO: Parts inferior in logic signal system between IC327, 20 pin (microcomputer port) test point. Breaking of pattern; soldering inferior. YES: Check ㉕.
	㉕	Q372 Base	1.75Vp-p	NO: Q320, Q372 parts inferior, voltage checking the surrounding circuits. Breaking of pattern, soldering inferior between IC301, 20 pin, 21 pin and test point. Q365 inferior. YES: Breaking of pattern, soldering inferior between Q372 emitter and Q305 base. Check Q372 defect, surrounding circuits.
13. When color balance is ON, wide range ON/OFF does not work.	㉖	Q364 Base	Wide range ON DC – 6V OFF DC + 0.6V	NO: Parts of logic signal system inferior, breaking of pattern, soldering inferior between IC327, 21 pin (microcomputer port) and test point. YES: Q364 inferior. Check ㉔

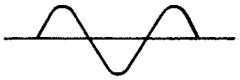
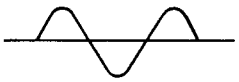
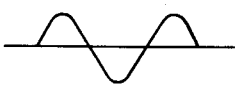
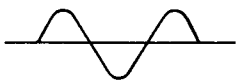
Symptom	Check Point		Normal Voltage and Waveform	Check Point and Defect
14. When enhance is ON, level VR doesn't work.	㉗	Q327 Emitter Q325 Emitter		NO: Parts inferior, pattern wire breaking, soldering inferior between CN302, 2 pin and Q326 base Q324, Q325, Q326, Q327 inferior. Check voltage of surrounding circuits. YES: Check ㉘.
	㉘	Q373 Base		NO: Parts of inferior, pattern breaking, soldering inferior between CN307 connector and enhance VR803. VR803 inferior. YES: Parts inferior pattern soldering inferior between IC310, 8, 9, 10, 11 pin. IC310, 5, 6 pin control signal system inferior. Parts, pattern soldering inferior between IC327, 17 pin (microcomputer port) and IC310, 5, 6 pin.
15. At the time of back color, output does not come out (color output)	㉙	(R) Q318 Base (G) Q319 Base (B) Q317 Base		NO: IC316, IC317 inferior. Pattern, soldering check between IC317 and test point. Connector, pattern check between CN308, rotary SW826 (back color select SW). YES: Check ㉚.
	㉚	IC302 1 Pin 24 Pin (When color bar select)	1 Pin (B−Y)  24 Pin (R−Y) 	NO: Q318, Q319, Q317 inferior. Surrounding circuit check, pattern, soldering check between test points. YES: Failure of IC315, check of the surrounding circuit. Check ㉛.
	㉛	IC302 14 Pin (When color bar select)		NO: IC302 inferior Check surrounding circuits. See Block Diagram inside IC. See "Adjustment Procedure" No. ⑦, ⑰ in VR303, VR307, VR308. YES: Check ㉜.
	㉜	IC303 1 Pin		NO: IC303, Q314 inferior. Check the surrounding circuits. See "Adjustment Procedure", NO. ⑰, ⑱, VR305, VR306, VR302, VR307, VR315. YES: IC303, wipe pattern change inferior. Check ㉝.
	㉝	Q313 Base		NO: Q313, Q314 inferior. Check the surrounding circuits. Check "Adjustment Procedure" NO.⑩, ⑫ VR313, VR314. YES: Check ㉞.
	㉞	IC306 9 Pin		NO: Q313, Q314, Q316, Q369 inferior. Check the surrounding circuits, pattern, soldering check. YES: IC316, wipe pattern change circuits inferior.
16. No image color at BY-PASS OFF. No synchronization at WIPE ON. Character Generator failure.	㉟	IC 332 10 Pin		NO: Check parts, pattern, soldering between IC301 30 pin and test point. Inferiority of IC301, SYNC, SEP. output. YES: Check ㊱.

Symptom	Check Point		Normal Voltage and Waveform	Check Point and Defect
	㊱	IC 332 15 Pin		NO: Inferiority of IC332. Check the surrounding circuits. YES: Check parts, pattern, soldering amoung test point, IC301 26 pin, IC319 11 pin.
17. When wipe pattern is ON, wipe action does not work. (As for final checking, see How to Adjust through cross hatch pattern and so on)	㊲	■□ or □■ pattern does not come out. Back color Source Side ■□ Back color Source Side IC319 11 pin	 H.SYNC Adjust linearity in VR339.	NO: Pattern, soldering check between IC319, 11 pin through IC332, 15 pin, H.SYNC output. IC319 inferior. Parts inferiority, surrounding circuits check between IC319, 6 pin and test point, check the surrounding circuits, pattern soldering check. YES: Check ㊳.
	㊳	Q345 Emitter	□■ ON ■□ ON Adjust level through VR338. Adjust balance of both waves through VR335.	NO: Check IC322, 11 pin, 10 pin, and 4 pin, 3 pin. Check control signal system from IC327, 28 pin (microcomputer port) to IC322, 12 pin. Check of inferiority of Q339, Q345, voltage of surrounding circuits.
	㊴	▬ or ▬ pattern does not come out. TP305	 V.SYNC Adjust linearity in VR332.	NO: Check pattern, soldering between Q332, corrector V.SYNC output and IC318, 4 pin. IC318 inferiority. Check parts inferiority between IC318, 7 pin and test point, voltage of surrounding circuits. YES: Check ㊵.
	㊵	Q346 Emitter	▬ ON  ▬ ON Adjust level through VR333. Adjust balance of both waves through VR340.	NO: Check IC321, 8 pin, 9 pin, and 3 pin, 4 pin. Check control signal system from IC327, 24 pin (microcomputer port) to IC321, 6 pin. Check IC326, 8, 9, 10, 11 pin. Inferiority of Q346, Q347. Voltage check of surrounding circuits.
	㊶	■□ + □■ pattern does not come out. IC320 6 Pin	 H.SYNC Adjust duty ratio to 50% by R328.	NO: Check H.SYNC signal between IC320, 4 pin and IC319, 12 pin. Check the surrounding circuits of IC320. YES: Check ㊷.
	㊷	Q340 Emitter	 Adjust linearity in VR337.	NO: Check voltage and waveform around Q340. YES: Check ㊸.

Symptom	Check Point		Normal Voltage and Waveform	Check Point and Defect
	㊸	TP306	Adjust level through VR336.	NO: Parts inferiority between Q340 emitter and test point, pattern, soldering check. YES: Inferiority of IC322. Check control signal system of IC327, 27 pin to IC322, 6 pin.
	㊹	▬ + ▬ pattern does not come out. IC320 10 Pin	 Adjust duty ratio to 50% by VR329.	NO: Check V.SYNC signal between IC320, 12 pin and IC318, 10 pin. Check circuits surrounding IC320. YES: Check ㊺.
	㊺	Q333 Emitter	Adjust linearity in VR330.	NO: Check voltage around Q333. YES: Check ㊻.
	㊻	IC321 11 Pin	Adjust level through VR331.	NO: Parts inferiority between Q333 emitter and test point, pattern, soldering check. YES: Inferiority of IC321. Check control signal system of IC327, 26 pin to IC321, 12 pin.
	㊼	● pattern does not come out.		NO: Inferiority of Q342, Q341. Check the surrounding circuits. YES: Check ㊽.
	㊽	Q337 Emitter		NO: Inferiority of Q336, Q337. Check the surrounding circuits. YES: Check ㊾.
	㊾	IC321 3 Pin	 Adjust level through VR334.	NO: Inferiority of Q338. Inferiority of parts between Q337, Q341 emitter and test point, pattern, inferiority of soldering. YES: Inferiority of IC321, check control signal system to 5 pin. Check IC327, 25 pin.
	㊿	Timer VR does not operate. CN309 1 Pin	VR Max DC +6V Min DC −6V	NO: Inferiority of VR801 (wipe VR) Check +/− power source line of control PC Board-3 Check contact of CN309 connector. YES: Inferiority of IC325, check the sorroun ding circuits.
18. Mulfunction of video fade VR.	(51)	When fade-out, source signal does not disappear (liminance signal only). IC311 7 Pin	When fade VR Min., 	NO: Inferiority IC311, check the surrounding circuits, check fade control voltage circuit between CN306, 2 pin and IC311, 3 pin. YES: Check parts, pattern, soldering between Q330 base and test point. See "Adjustment Procedure" NO. ⑧ VR319
	(52)	When fade-out, source signal does not disappear (chroma signal only). IC304 7 Pin		NO: Inferiority IC304, check the surrounding circuits, check fade control voltage circuit between CN306, 2 pin and IC304, 3 pin. YES: Check parts, pattern, and soldering between Q306 base and test point.

Symptom		Check Point	Normal Voltage and Waveform	Check Point and Defect
See Section "Adjustment Procedure", No. 8, No. 9, No. 10, No. 11, Item Offset for final check.	㊸	When fade-in, back color does not disappear (luminance signal only). IC309 7 Pin	70m Vp-p or less  When fade VR Max.	NO: Inferiority of IC309, check the surrounding circuits, fade control voltage circuit between CN306, 3 pin and IC309, 3 pin. YES: Check parts, pattern, and soldering between Q330 base and test point.
	㊹	When fade-in, back color does not disappear (Chroma signal only). IC305 7 Pin	30mVp-p or less 	NO: Inferiority of IC305, check the surrounding circuits, check fade control voltage circuit between CN306, 3 pin and IC305, 3 pin. YES: Check parts, pattern, and soldering between Q306 base and test point.
19. Image output does not produce character.	㊺	IC334, 5 pin Set MONITOR SELECT to C/G PRE-VIEW.	 H.SYNC.	NO: Check parts, pattern, soldering between IC301 30 pin and test point. YES: Check ㊻.
	㊻	IC327 9 pin	 H.SYNC	NO: Check parts, pattern, soldering between IC334 5 pin and test point. Inferiority of IC334, check the surrounding circuits. Check parts, pattern, soldering between test point and IC329 5 pin. YES: Check ㊼.
	㊼	IC329 6 pin IC327 18 pin	 V.SYNC.	NO: Check parts, pattern, soldering between IC318, 4pin, 10 pin and test point. Check ㊴. YES: Check ㊽.
	㊽	IC329 17 pin 18 pin 19 pin	(17 pin)  (18 pin) (19 pin)  V.SYNC	NO: Check pattern, soldeirng between IC327 16 pin, 17 pin, 55 pin and test point. IC327. YES: IC329 inferior. Check parts, pattern, soldering between IC329 3 pin, 4 pin and CN318 2 pin, 4 pin.
20. Image output does not produce character. (At PROGRAM)	㊾	Q33 Base	 V.SYNC	NO: Check parts, pattern, soldering between IC329 3 pin and test point. YES: Check parts between CN318 2 pin and IC16; parts between IC8 and IC17 3 pin; breaking of pattern; soldering inferior. Check ㊿.
	㊿	IC7 1 pin 7 pin	1 Pin DC −4.4V 7 Pin DC +4.4V	NO: Inferiority of IC7. Check the surounding circuits. YES: Check pattern, soldering between test point and CN318.

Symptom	Check Point		Normal Voltage and Waveform	Check Point and Defect
21. Characters are not outlined.	⑥①	Q35 Base	 V.SYNC	NO: Check parts, pattern, soldering between IC329 4 pin and test point. YES: Check parts, pattern, soldering between CN303 4 pin and Q34 Base. Check the circuits surrounding D40, Q35.
22. Characters are not produced. (At C/G PREVIEW)	⑥②	Q32 Emitter Back color: Black FADE VR: Back	 V.SYNC	NO: Check parts, pattern, soldering between CN303 4 pin and test point. YES: Check pattern, soldering between test point and IC13 9 pin.
Character color is no good.	⑥③	Q28 Emitter Back color: White FADE VR: Back		NO: Check parts, pattern, soldering between CN303 2 pin and test point. YES: Check pattern, soldering inferior between test point and IC12 9 pin.
23. Any audio output terminal does not produce any output.	⑥④	To 805 1 pin 2 pin	1 Pin DC+6V 2 Pin DC−6V	NO: Check connector, wire, pattern, soldering between CN906 5 pin, 7 pin. YES: Check +/− power source line of IC809, 816, 817, 818.
24. Only MONITOR does not output at AUDIO output.	⑥⑤	IC 809, 817 L CH 13 Pin R CH 3 Pin	 −10dBV (0.32V RMS)	NO: Check inferiority of IC809, 817 and the surrounding circuits. Inferiority of control signal system (Check against "Logic Truth Tables"). YES: Check ⑥⑥.
	⑥⑥	IC822 L CH 6, 7 Pin R CH 1, 2 Pin		NO: Check parts, pattern, soldering between IC809, 817, 13 pin, 3 pin and test point. Inferiority of IC822. YES: Check connector, pattern, soldering among test point, CN802 and output terminal.
25. No REC output at AUDIO output.	⑥⑦	IC816 L CH 8, 10 Pin R CH 4, 10 Pin		NO: Check inferiority of IC816, the surrounding circuit. Check control signal sysem (Check against "Logic Truth Tables"). YES: Check ⑥⑧.
	⑥⑧	IC818 L CH 11, 9 Pin R CH 2, 4 Pin		NO: Check inferiority of IC818, the surrounding circuits. Inferiority of control signal system Check against "Logic Truth Tables"). YES: Check parts, pattern, soldering between test point and output terminal.
26. Only BY-PASS OFF does not output at AUDIO output.	⑥⑨	IC 818 L CH 8 Pin R CH 3 Pin		NO: Inferiority of parts of VR808, VR809, IC811, 819. Inferiority of pattern, sodering Check between VR808 and test point. YES: Inferiority of IC818, control signal system (Check "Logic Truth Tables").

Symptom	Check Point		Normal Voltage and Waveform	Check Point and Defect
27. Only VCR does not input at AUDIO input.	⑦⓪	IC816 LCH RCH SOURCE 1 9 3 SOURCE 2 11 1		NO: Check parts, pattern, soldering between input inferior terminal and test point. YES: Inferiority of IC816. Inferiority of control signal system (Check against "Logic Truth Tables").
28. Some CH can not MONITOR SELECT at AUDIO input.	⑦①	IC817 LCH RCH SOURCE 1 15 2 SOURCE 2 14 5 PROGRAM 12 1 IC809 LCH RCH RETURN 12 1 AUX/MIC 14 5		NO: Check parts, pattern, soldering between the select inferior terminal and each test point. YES: Inferiority of IC817, 809. Inferiority of control signal system (Check against "Logic Truth Tables").
29. Only AUX does not input at audio input.	⑦②	IC 806 L CH 8 Pin RCH 4 Pin		NO: Check parts, pattern, soldering between AUX input terminal and test point. Inferiority of IC804. YES: Inferiority of IC806. Inferiority of control signal system (Check against "Logic Truth Tables").
30. Only MIC does not input AUDIO output.	⑦③	IC 803 8 Pin	 −15dBV (0.18V RMS)	NO: Check parts, pattern between MIC terminal and IC803 2 pin. YES: Check ⑦④.
	⑦④	IC 806 11 Pin 2 Pin	 −10dBV (0.32VRMS)	NO: Inferiority of IC821. Check parts, pattern, soldring between IC803 8 pin and test point. YES: Check inferiority of IC806, the surrounding circuits. Check control signal system (Check against "Logic Truth Tables).
31. No H-PHONE output at AUDIO output.	⑦⑤	CN310 L CH 1 Pin R CH 3 Pin		NO: Check connector, pattern, soldering between IC822 and test point. YES: Check ⑦⑥.
	⑦⑥	CN804 L CH 1 Pin R CH 3 Pin	 −6dBV (0.5V RMS)	NO: Check parts between CN310 and test point, VR802, IC802. Check pattern, soldeing.
32. Audio level meter light is inferior.	⑦⑦	CN806 L CH 3 Pin R CH 4 Pin	 −8dBV (0.4V RMS)	NO: Check pattern, soldering between CN310 and IC814. Inferiority of IC814. Check connector, pattern, soldeing between IC814 and test point. YES: Check pattern, soldering among test point, level meter and input terminal. Check ⑦⑧.
	⑦⑧	Audio level meter 7 Pin 1, 3, 5, 6 Pin	7 Pin DC+4.5 V 1, 3, 5, 6 Pin GND	NO: Check power source line between CN806 and test point. YES: Inferiority of audio level meter.

12. Electric Parts List

⚠	Item No.	Symbol No.	Part No.	Part Name	Q'ty	Remarks
		<Main PC Board>				
		ICs				
		IC301	M51279SP	IC	1	Mitsubishi
		IC302	M51272P	IC 3x	1	Mitsubishi
		IC304, 305, 307, 309, 311	AN614	IC	5	Matsushita
		IC303, 306, 308, 310, 321, 322, 326	TC4066BP	IC	8	Toshiba
		IC312, 314, 318~320	TC4538BP	IC	5	Toshiba
		IC315, 330	TC4011BP	IC	2	Toshiba
		IC316	TC4029BP	IC	1	Toshiba
		IC317	TC4073BP	IC 3x	1	Toshiba
		IC323	TC4023BP	IC 3x	1	Toshiba
		IC324	TC4001BP	IC	1	Toshiba
		IC325	μPC319C	IC	1	NEC
		IC327	μPD75106CW-157	IC	1	NEC
		IC313	TC4584BP	IC	1	Toshiba
		IC328	BR6116-100	IC	1	Rohm (or LC3517AL-15K)
		IC329	MB89012-106	IC	1	Fujitsu
		IC331	BA15218	IC	1	Rohm
		IC332	HA11423	IC	1	Hitachi
		IC333	TC74HC74P	IC	1	Toshiba
		IC334	TC7538BP	IC 3x	1	Toshiba
		IC335	M51951BSL	IC	1	Mitsubishi
		IC902	μPC78L05J	IC	1	NEC
		Transistors				
		Q301~309, 312, 313, 316~330, 332~334, 336, 337, 339~342, 344~347, 363~365, 369~374	2SC2603E, F	Transistor	48	Mitsubishi
		Q314, 335, 338, 343, 377, 378	2SA1115E, F	Transistor	7	Mitsubishi
		Q331, 348~353, 356~359, 366, 385	DTA124ES	Digital Transistor	13	Rohm
		Q361, 362, 367, 375, 382~384, 386	DTC124ES	Digital Transistor	8	Rohm
		Diodes				
		D902, 903	RD6•2ES-B1	Zener Diode 3x	2	NEC
		D302, 304~307, 309, 312~321, 601, 904	1SS119	Diode	18	Hitachi
		Capacitors				
		C474	EEZ0503-479	Electrolytic Capacitor	1	0.047F/5.5V
		C414, 423	QETB1AM-227	Electrolytic Capacitor	2	220μF/10V
		C338, 359, 360, 372, 378, 397~399, 403~405, 408, 467	QER51CM-106	Electrolytic Capacitor	13	10μF/16V
		C309, 325, 343, 347~350, 354, 363, 374, 395, 401, 402, 417~419, 424, 439, 497, 460	QETB1CM-476	Electrolytic Capacitor	19	47μF/16V
		C305, 355, 361, 364, 367, 371, 426, 435, 442, 443, 446, 448, 451, 463, 471	QETB1CM-107	Electrolytic Capacitor	15	100μF/16V
		C415, 416	QEN51VM-475	Electrolytic Capacitor	2	4.7μF/35V (non-polarity) (Available 50V)
		C317, 472	QEN51HM-474	Electrolytic Capacitor	1	0.47μF/50V
		C302, 304, 311, 316, 342, 353, 358, 362, 373, 375, 425, 464	QET51HM-105	Electrolytic Capacity	12	1μF/50V
		C315, 422	QETB1HM-225	Electrolytic Capacitor	6	2.2μF/50V
		C393, 394, 396, 891, 892	QETB1HM-475	Electrolytic Capacitor	3	4.7μF/50V
		C303, 889, 890	QCY21HK-102	Ceramic Capacitor	1	0.001μF/50V
		C301, 306~308, 320, 321, 323, 324, 331, 333, 335~337, 339, 341, 344, 346, 351, 352, 422, 428, 430, 436, 438, 440, 441, 445	QCY21HK-103	Ceramic Capacitor	31	0.01μF/50V
		C432, 452, 455~457	QCY21HK-101	Ceramic Capacitor	2	100pF/50V
		C444	QCY21HJ-331	Ceramic Capacitor	1	330pF/50V
		C313	QCY21HK-561	Ceramic Capacitor	1	560pF/50V
		C366, 369	QCS21HJ-7RO	Ceramic Capacitor	2	7pF/50V (SL)
		C332	QCS21HJ-8RO	Ceramic Capacitor	1	18pF/50V (SL)
		C314	QCS21HJ-100	Ceramic Capacitor	1	10pF/50V (SL)
		C429, 431	QCS21HJ-150	Ceramic Capacitor	2	15pF/50V (SL)
		C327	QCS21HJ-180	Ceramic Capacitor	1	18pF/50V (SL)
		C420, 476	QCS21HJ-200	Ceramic Capacitor	2	20pF/50V (SL)
		C421, 475	QCS21HJ-300	Ceramic Capacitor	2	30pF/50V (SL)

⚠	Item No.	Symbol No.	Part No.	Part Name	Q'ty	Remarks
		C368	QCS21HJ-470	Ceramic Capacitor	1	47pF/50V (SL)
		C334, 437, 601	QCS21HJ-560	Ceramic Capacitor	3	56pF/50V (SL)
		C370	QCS21HJ-221	Ceramic Capacitor	1	220pF/50V (SL)
		C390	QCT26CH-270	Ceramic Capacitor	1	27pF/50V (CH)
		C381, 384, 386, 389, 478	QCT26CH-101	Ceramic Capacitor	3	100pF/50V (CH)
		C383	QCT26CH-151	Ceramic Capacitor	1	150pF/50V (CH)
		C450	QCS21HJ-201	Ceramic Capacitor	1	200pF/50V (SL)
		C385	QCT26CH-221	Ceramic Capacitor	1	220pF/50V (CH)
		C884~887	QCY21HJ-682	Ceramic Capacitor	4	0.0068μF/50V
		C377, 387, 388, 406, 407, 462	QFV81HJ-333	Mylar Capacitor	7	0.033μF/50V
		C318, 319, 322, 326, 330	QFV81HJ-473	Mylar Capacitor	5	0.047μF/50V
		C328, 329, 356, 357, 473	QFV81CJ-104	Mylar Capacitor	5	0.1μF/16V
		C310, 392	QFV81HJ-104	Mylar Capacitor	2	0.1μF/50V
		C391	QFN31HJ-222	Mylar Capacitor	1	0.0022μF/50V
		C380, 382, 466, 477, 602	QFN31HJ-332	Mylar Capacitor	4	0.0033μF/50V
		C469	QFN31HJ-562	Mylar Capacitor	1	0.0056μF/50V
		C468	QFN31HJ-682	Mylar Capacitor	1	0.0068μF/50V
		C379	QFN31HJ-103	Mylar Capacitor	1	0.01μF/50V
		C411, 412, 465	QFN31HJ-153	Mylar Capacitor	2	0.015μF/50V
		C409, 410	QFN31HJ-183	Mylar Capacitor	2	0.018μF/50V
		C312	J44141-300 3×	Trim Capacitor	1	30pF
		Resistors				
		R310, 424, 451, 608, 723, 764, 769, 788	QRD141J-101	Carbon Resistor	8	100Ω ¼W
		R505	QRD141J-151	Carbon Resistor	1	150Ω ¼W
		R301	QRD141J-181	Carbon Resistor	1	180Ω ¼W
		R307, 316, 317, 324, 328, 329, 340, 341, 355, 356, 382, 404, 408, 409, 434, 436, 443, 444, 492, 526, 573, 574, 577, 578, 587, 605, 606, 607, 611, 706, 707, 731, 748, 904	QRD141J-102	Carbon Resistor	34	1KΩ ¼W
		R376, 377, 491, 525	QRD141J-122	Carbon Resistor	5	1.2KΩ ¼W
		R308, 311, 343, 402, 742,	QRD141J-152	Carbon Resistor	5	1.5KΩ ¼W
		R321, 323, 325, 332~335, 339, 347, 357, 361, 387~392, 397, 398, 420, 421, 442, 456, 458, 462, 468, 474, 475, 506~508, 520, 521, 547, 575, 576, 601, 761, 768, 779	QRD141J-103	Carbon Resistor	40	10KΩ ¼W
		R484, 556, 579	QRD141J-123	Carbon Resistor	3	12KΩ ¼W
		R396, 453, 510, 513, 614, 766	QRD141J-153	Carbon Resistor	6	15KΩ ¼W
		R304, 704, 770	QRD141J-183	Carbon Resistor	3	18KΩ ¼W
		R454, 460, 461, 463, 469, 775	QRD141J-104	Carbon Resistor	6	100KΩ ¼W
		R312	QRD141J-154	Carbon Resistor	1	150KΩ ¼W
		R755, 773	QRD141J-105	Carbon Resistor	2	1MΩ ¼W
		R512, 519, 549, 594, 597, 599, 600, 713, 729, 738, 749, 759, 760	QRD141J-221	Carbon Resistor	13	220Ω ¼W
		R589	QRD141J-202	Carbon Resistor	1	2KΩ ¼W
		R479, 503, 511, 514, 588, 590, 732, 602, 603,	QRD141J-222	Carbon Resistor	9	2.2KΩ ¼W
		R318, 319, 371, 372, 374, 375, 383, 410, 412, 427, 428, 431, 432, 473, 480, 501, 739, 740	QRD141J-272	Carbon Resistor	18	2.7KΩ ¼W
		R303, 448	QRD141J-203	Carbon Resistor	2	20KΩ ¼W
		R345, 350, 401, 422, 440, 459, 489, 522, 527~530, 563, 572, 582, 604, 610, 615, 705, 710~712, 722, 724, 758, 763, 777, 778, 781~783, 785	QRD141J-223	Carbon Resistor	32	22KΩ ¼W
		R305, 466	QRD141J-223	Carbon Resistor	2	27KΩ ¼W
		R786	QRD141J-225	Carbon Resistor	1	2.2MΩ ¼W
		R336, 337, 362, 363, 747	QRD141J-330	Carbon Resistor	4	33Ω ¼W
		R302, 414, 416, 430, 433, 472, 498, 570, 747, 754	QRD141J-331	Carbon Resistor	10	330Ω ¼W
		R502	QRD141J-391	Carbon Resistor	1	390Ω ¼W
		R314, 315, 338, 342, 406, 415, 417, 445, 470, 569, 613, 709, 746, 386	QRD141J-332	Carbon Resistor	14	3.3KΩ ¼W
		R327	QRD141J-362	Carbon Resistor	1	3.6KΩ ¼W
		R330, 331, 348, 419, 438, 457, 509, 566, 595, 596, 715, 725, 744	QRD141J-392	Carbon Resistor	13	3.9KΩ ¼W

⚠	Item No.	Symbol No.	Part No.	Part Name	Q'ty	Remarks
		R393~395, 485~488, 493~497, 523, 524, 771	QRD141J-333	Carbon Resistor	15	33KΩ ¼W
		R313, 735	QRD141J-394	Carbon Resistor	2	390KΩ ¼W
		R403, 476, 478	QRD141J-471	Carbon Resistor	5	470Ω ¼W
		R358, 360, 365, 380, 384, 385, 407, 429, 435, 446, 447, 452, 481~483, 490, 499, 500, 517, 518, 554, 557, 580, 581, 730, 767, 787	QRD141J-472	Carbon Resistor	27	4.7KΩ ¼W
		R344, 346, 351, 400, 423, 439, 455, 553, 571, 591	QRD141J-473	Carbon Resistor	10	47KΩ ¼W
		R306	QRD141J-474	Carbon Resistor	1	470KΩ ¼W
		R756, 757	QRD141J-560	Carbon Resistor	2	56Ω ¼W
		R381	QRD141J-511	Carbon Resistor	1	510Ω ¼W
		R368, 373, 548, 953, 954	QRD141J-561	Carbon Resistor	5	560Ω ¼W
		R320, 322, 399, 545, 609, 679, 721, 728	QRD141J-562	Carbon Resistor	8	5.6KΩ ¼W
		R515, 516	QRD141J-563	Carbon Resistor	2	56KΩ ¼W
		R309	QRD141J-680	Carbon Resistor	1	68Ω ¼W
		R471, 477, 504, 612, 708	QRD141J-682	Carbon Resistor	5	6.8KΩ ¼W
		R762, 765	QRD141J-683	Carbon Resistor	2	68KΩ ¼W
		R413, 749	QRD141J-684	Carbon Resistor	2	680KΩ ¼W
		R352	QRD141J-821	Carbon Resistor	1	820Ω ¼W
		R353, 544, 776	QRD141J-822	Carbon Resistor	3	8.2KΩ ¼W
		R465, 772	QRD141J-823	Carbon Resistor	2	82KΩ ¼W
		R418, 551	QRD141J-912	Carbon Resistor	2	9.1KΩ ¼W
		R745	J44698-001 3×	Metal Resistor	1	6.8KΩ ¼W
		VR335, 340	QVPD602-501	Semi-fixed Resistor	2	500B
		VR305, 306, 320, 343, 344	QVPD602-102	Semi-fixed Resistor	5	1KB
		VR303, 308, 309, 312~314, 316~318, 337	QVPD602-202	Semi-fixed Resistor	10	2KB
		VR315, 330~333, 336, 338, 339, 346	QVPD602-502	Semi-fixed Resistor	9	5KB
		VR322, 324, 328, 334	QVPD602-103	Semi-fixed Resistor	4	10KB
		VR323	QVZ3518-103	Semi-fixed Resistor	1	10KB
		VR301, 302, 321, 326, 327, 329	QVPD602-503	Semi-fixed Resistor	6	50KB
		AR1	QRB045J-223	Resistance Arrey	1	22KΩ×4
		L301	J42574-390	Inductor	1	39μH
		L302, 303	J42574-101	Inductor	2	100μH
		L304	J42574-150	Inductor	1	15μH
		X301	J44699-001 3×	CERA-LOCK	1	3.58MHz
		X302	J44700-001	CRYSTAL	1	17.734475MHz
		L801~808	EQL4004-100	Inductor	8	10μH
		SW301	J44750-001 3×	Slide Switch	1	
		PJ301, 2	J44343-001	21 Pin connector	2	
		PJ303	J44424-001	Pin Jack	1	1P (White)
		PJ304	J44756-001	Pin Jack	1	1P (Red)
		PJ305~307	J44421-001	Mini Jack	3	
		Connectors				
		CN302, 317	J44436-001	Connector	2	2P
		CN307	J43143-001	Connector	1	6P
		CN309	J44704-001	Connector	1	3P (Blue)
		CN306	J44704-002	Connector	1	3P (White)
		CN305	J44705-001	Connector	1	4P (Blue)
		CN308	J44705-002	Connector	1	4P (Red)
		CN311	J44705-003	Connector	1	4P (Black)
		CN313	J44705-004	Connector	1	4P (Yellow)
		CN312	J44706-007	Connector	1	10P (Blue)
			J31911-001	Main PC Board		
	1		J31912-001	Main PC Board Ass'y	1	(Not supplied as an Ass'y P.C. Board)
		<VIDEO PC Board>				
		ICs				
		IC1~5, 12~14	TC4066BP	IC	8	Toshiba
		IC6	TC4069μBP 3×	IC	1	Toshiba
		IC7	BA15218	IC	1	Rohm
		IC8, 11, 17	LA7016 3×	IC	3	Sanyo
		IC10	AN614	IC	1	Matsushiba
		IC16	TC4001BP	IC	1	Toshiba
⚠		IC901	M5290P	IC	1	Mitsubishi
		IC903	μPC78L05J	IC	1	NEC

⚠	Item No.	Symbol No.	Part No.	Part Name	Q'ty	Remarks
		Diodes				
		D11~15, 37	RD8.2ES-B3	Zener Diode	6	
		D42~45	RD4.7ES-B3	Zener Diode	4	
		D907	RD12ES-B3	Zener Diode	1	
		D1~10, 16~36, 39~41, 46, 47, 905, 906, 908	ISS119	Diode	39	Hitachi
⚠		D901	3B4B41	Bridge Diode	1	Toshiba
		Transistors				
		Q1~6, 9, 11, 21, 22, 27, 28, 32, 35, 38, 40, 41, 44, 46, 49, 51, 53, 55, 57, 59, 63, 67	2SA1115E, F	Transistor	25	Mitsubishi
		Q7, 8, 10, 12~20, 23~26, 33, 34, 37, 39, 42, 43, 45, 47, 48, 50, 52, 54, 56, 64~66, 903	2SC2603E, F	Transistor	33	Mitsubishi
		Q58, 60~62, 905	DTC124FS	Digital Transistor	5	Rohm
		Q904	DTA124FS	Digital Transistor	1	Rohm
⚠		Q901	2SD1406	Transistor	1	
⚠		Q902	2SB1015	Transistor	1	
		Capacitors				
		C1, 3, 5	QEK50JM-476	Electrolytic Capacitor	3	47μF/6.3V
		C906, 907	QETB1AM-477	Electrolytic Capacitor	2	470μF/10V
		C22, 909	QETB1CM-106	Electrolytic Capacitor	2	10μF/16V
		C21, 24	QETB1CM-476	Electrolytic Capacitor	2	47μF/16V
		C7, 17, 18, 27, 28, 34, 36~41, 48, 49, 910, 912	QETB1CM-107	Electrolytic Capacitor	14	100μF/16V
		C905	QETB1CM-22B	Electrolytic Capacitor	1	2200μF/16V
		C904	QETB1CM-338	Electrolytic Capacitor	1	3300μF/16V
		C42, 43	QET51HM-105	Electrolytic Capacitor	2	1μF/50V
		C844, 845	QETB1HM-475	Electrolytic Capacitor	2	4.7μF/50V
		C842, 843, 846, 847	QCY21HK-102	Ceramic Capacitor	4	0.001μF/50V
		C838~841	QCY21HK-682	Ceramic Capacitor	4	0.0068μF/50V
⚠		C2, 4, 6, 10, 13~16, 20, 23, 25, 26, 29, 33, 35, 44~46, 901~903	QCY21HK-103	Ceramic Capacitor	21	0.01μF/50V
		C19, 30, 47	QCS21HJ-100	Ceramic Capacitor	5	10pF/50V (SL)
		C9	QCS21HJ-150	Ceramic Capacitor	1	15pF/50V (SL)
		C8	J44141-300	Trim Capacitor	1	30pF
		Resistors				
		R124, 149, 158, 194, 201, 208	QRD141J-101	Carbon Resistor	7	100Ω ¼W
		R57, 64, 195, 202, 209	QRD141J-181	Carbon Resistor	5	180Ω ¼W
		R32, 33, 39, 42, 112, 143, 173, 183, 224	QRD141J-102	Carbon Resistor	8	1KΩ ¼W
		R40	QRD141J-122	Carbon Resistor	1	1.2KΩ ¼W
		R31	QRD141J-152	Carbon Resistor	1	1.5KΩ ¼W
		R42, 68, 71, 75, 88, 106, 109, 110, 113, 179, 197, 903	QRD141J-103	Carbon Resistor	10	10KΩ ¼W
		R140, 155, 165, 170	QRD141J-113	Carbon Resistor	4	11KΩ ¼W
		R65	QRD141J-183	Carbon Resistor	1	18KΩ ¼W
		R74, 77~81, 223, 237	QRD141J-104	Carbon Resistor	7	100KΩ ¼W
		R19~23, 38, 49, 61, 69, 70, 72, 76, 84~86, 89, 94, 97, 98, 100, 104, 107, 114, 122, 136, 174, 182, 187, 189, 191, 192, 216, 220, 240	QRD141J-221	Carbon Resistor	32	220Ω ¼W
		R196, 203, 210	QRD141J-241	Carbon Resistor	3	240Ω ¼W
		R58, 63	QRD141J-222	Carbon Resistor	2	2.2KΩ ¼W
		R25~30, 50, 67, 73, 95, 121, 126, 151, 160, 176~178, 200, 207, 214, 215, 217, 233, 239	QRD141J-272	Carbon Resistor	21	2.7KΩ ¼W
		R13~18, 219	QRD141J-203	Carbon Resistor	7	20KΩ ¼W
		R882, 883	QRD141J-330	Carbon Resistor	2	33Ω ¼W
		R7~12, 41, 156, 164, 171, 172, 184, 218, 222, 235, 905, 906	QRD141J-223	Carbon Resistor	17	22KΩ ¼W
		R204, 211, 234	QRD141J-361	Carbon Resistor	3	360Ω ¼W
		R59	QRD141J-391	Carbon Resistor	1	390Ω ¼W
		R60, 62, 83, 91~93, 99, 102, 105, 111, 115, 175, 229, 230	QRD141J-392	Carbon Resistor	13	3.9KΩ ¼W
		R66, 82, 123, 188, 227, 228, 829, 901, 902, 909	QRD141J-472	Carbon Resistor	7	4.7KΩ ¼W
		R43, 135, 139, 198, 205, 212, 221, 884, 885, 907	QRD141J-561	Carbon Resistor	10	560Ω ¼W

⚠	Item No.	Symbol No.	Part No.	Part Name	Q'ty	Remarks
		R46~48, 51~56, 116~119, 185, 186, 238, 908	QRD141J-562	Carbon Resistor	13	5.6KΩ ¼W
		R225, 226	QRD141J-563	Carbon Resistor	2	56KΩ ¼W
		R125, 133, 134, 148, 150, 157, 159, 166	QRD141J-680	Carbon Resistor	8	68Ω ¼W
		R34, 129, 146, 154, 163, 169	QRD141J-621	Carbon Resistor	6	620Ω ¼W
		R35, 37, 44, 45, 127, 128, 137, 138, 144, 145, 152, 153, 161, 162, 167, 168	QRD141J-681	Carbon Resistor	15	680Ω ¼W
		R180	QRD141J-622	Carbon Resistor	1	6.2KΩ ¼W
		R90, 96	QRD141J-682	Carbon Resistor	3	6.8KΩ ¼W
		R1~6	QRD141J-750	Carbon Resistor	6	75Ω ¼W
		R128	QRD141-821	Carbon Resistor		820Ω ¼W
		R199, 206, 213	QRD141J-911	Carbon Resistor	3	910Ω ¼W
		R232	QRD141-912	Carbon Resistor		9.1KΩ ¼W
		VR1~4	QVPD602-472	Semi-fixed Resistor	4	4.7KΩ
		VR516	QVPD672-103	Semi-fixed Resistor	2	10KΩ
	3	PJ801	J44752-001	Mic Jack	1	
	4	PJ802	J44419-001	Headphone Jack	1	
		PJ1~3	J44343-001	21 pin Connector	3	
		SW1~3	J44750-001	Slide Switch	3	
		SW4~27	J43126-001	Tact Switch	24	
		L1, 2	J42574-101	Inductor	2	100μH
		L809~816	EQL4004-100	Inductor	8	10μH
		DL-1	J44751-001	Delay Line	1	
		BPF-1	J43411-001	B.P.F	1	
		Connectors				
		CN301, 317	J44436-001	Connectors	2	2P
		CN314, 804, 809, 811, 812, 814, 815	J43612-001	Connectors	7	3P
		CN303, 315, 316, 318	J43681-001	Connectors	4	4P
		CN903	J43143-001	Connectors	1	6P
		CN905	J43682-001	Connectors	1	7P
		CN906	J43683-001	Connectors	1	8P
		CN3	J44706-002	Connectors	1	10P (Red)
⚠		CN901, 902	J43613-001	Connectors	2	3P (For the use of Power Supply)
			J31913-001	Video P.C. Board		
	2		J31914-001	Video P.C. Board Ass'y	1	(Not supplied as an Ass'y P.C. Board)
		<**Control PC Board**>				
		ICs				
		IC801	M50780SP	IC	1	Mitsubishi
		IC802, 804, 805, 807, 810~815, 819~822	BA15218	IC	14	Rohm
		IC806, 816, 818	TC4066BP	IC	3	Toshiba
		IC809, 817	TC4052BP	IC	2	Toshiba
		IC803	LA3210	IC	1	Sanyo
		Transistors				
		Q814~818	DTC124ES	Digital Transistor	5	Rohm
		Q801~813, 819, 821	DTA124ES	Digital Transistor	15	Rohm
		Diodes				
		D820~834, 836~839, 842~845	ISS119	Diode	23	Hitachi
		D801~803, 805, 806, 808~814	SLR34MG70F165	LED	12	Green Rohm
		D804, 807, 815~819	SLR34YY70F165	LED	7	Yellow Rohm
		D840, 841	SLR34VR70F130	LED	2	Red Rohm
		D835	SLR34VR70F165	LED	1	Red Rohm
		LV801	PU60930	LED Level Meter	1	Rohm
		Capacitors				
		C801, 809, 814, 815	QETBOJM-106	Electolytic Capacitor	4	10μF/6.3V
		C804, 805, 816, 817, 820, 821, 828, 829	QETBOJM-107	Electolytic Capacitor	8	100μF/6.3V
		C818	QETBOJM-227	Electolytic Capacitor	1	220μF/63V
		C803, 806	QETBOJM-476	Electolytic Capacitor	2	47μF/63V
		C810~812, 822~825, 837	QETBIJM-225	Electolytic Capacitor	8	2.2μF/50V
		C807, 813, 819	QETBIJM-475	Electolytic Capacitor	3	4.7μF/50V
		C827	QCY21HK-103	Ceramic Capacitor	1	0.01μF/50V
		C808	QCY21HK-102	Ceramic Capacitor	1	0.001μF/50V
		C826, 830~836	QCS21HJ-220	Ceramic Capacitor	8	22pF/50V (SL)
		C802	QCS21HJ-300	Ceramic Capacitor	1	30pF/50V (SL)

⚠	Item No.	Symbol No.	Part No.	Part Name	Q'ty	Remarks
		Resistors				
		R803, 862	QRD141J-101	Carbon Resistor	2	100Ω ¼W
		R892	QRD141J-152	Carbon Resistor	1	1.5KΩ ¼W
		R874, 875, 887, 891	QRD141J-103	Carbon Resistor	4	10KΩ ¼W
		R824	QRD141J-123	Carbon Resistor	1	12KΩ ¼W
		R896, 897, 953	QRD141J-153	Carbon Resistor	3	15KΩ ¼W
		R870~873, 876, 877	QRD141J-104	Carbon Resistor	6	100KΩ ¼W
		R801, 802, 805~810, 812~817	QRD141J-221	Carbon Resistor	14	220Ω ¼W
		R818	QRD141J-222	Carbon Resistor	1	2.2KΩ ¼W
		R826, 867~869, 878~881	QRD141J-223	Carbon Resistor	8	22KΩ ¼W
		R890, 954	QRD141J-273	Carbon Resistor	2	27KΩ ¼W
		R886	QRD141J-274	Carbon Resistor	1	220KΩ ¼W
		R851, 852, 951, 952	QRD141J-180	Carbon Resistor	4	18Ω ¼W
		R811	QRD141J-332	Carbon Resistor	1	3.3KΩ ¼W
		R823	QRD141J-334	Carbon Resistor	1	330KΩ ¼W
		R832~839, 850, 853~859, 899, 900	QRD141J-473	Carbon Resistor	18	47KΩ ¼W
		R827, 828, 830, 831, 842, 843, 846~849	QRD141J-561	Carbon Resistor	10	560Ω ¼W
		R819, 822, 893	QRD141J-563	Carbon Resistor	3	56KΩ ¼W
		R820	QRD141J-681	Carbon Resistor	1	680Ω ¼W
		R895, 898	QRD141J-683	Carbon Resistor	2	68KΩ ¼W
		R840, 841, 844, 845, 860, 861, 863~866, 888, 889	QRD141J-684	Carbon Resistor	12	680KΩ ¼W
		R894	QRD141J-8R2	Carbon Resistor	1	8.2Ω ¼W
		SW801~821	J43126-001	Tact Switch	20	
		SW826	J44411-001	Rotary Switch	1	
		VR801	J44412-001	Slide Volume	1	10KB
		VR802	J44413-001	Slide Volume	1	20KA × 2
		VR803	J44414-001	Slide Volume	1	1KB
		VR804	J44415-001	Slide Volume	1	10KB
		VR808	J44701-001	Slide Volume	1	20KB × 2
		VR810	J44416-001	Slide Volume	1	10KB × 2
		VR809	J44475-001	Slide Volume	1	20KA × 2
		VR811	J44417-001	JOY Stick	1	1KB
		Connectors				
		CN310	J44098-001	Connector	1	3P (side)
		CN808, 810	J44712-001	Connector	2	3P (bottom)
		CN806	J44707-001	Connector	1	4P
		CN805	J44708-001	Connector	1	5P
		CN807	J44709-001	Connector	1	6P
		CN802	J44710-001	Connector	1	9P
		CN801	J44711-001	Connector	1	10P
			J31915-001	Control P.C. Board		
	5		J31916-001	Control P.C. Board Ass'y	1	(Not supplied as an Ass'y P.C. Board)
		<WIRES>				
		TO317, 301	J44445-021	Wire Ass'y	2	2P Shield
		TO302	J44445-014	Wire Ass'y	1	2P Shield
		TO804	J44713-018	Wire Ass'y	1	3P Shield
		TO310, 809	J44713-031	Wire Ass'y	2	3P Shield
		TO810, 815	J44713-035	Wire Ass'y	2	3P Shield
		TO808	J44713-037	Wire Ass'y	1	3P Shield
		TO314	J44713-038	Wire Ass'y	1	3P Shield
		TO811	J44713-040	Wire Ass'y	1	3P Shield
		TO812, 814	J44713-042	Wire Ass'y	2	3P Shield
		TO318	J44714-023	Wire Ass'y	1	4P Shield
		TO303	J44714-026	Wire Ass'y	1	4P Shield
		TO316	J44714-030	Wire Ass'y	1	4P Shield
		TO315	J44714-035	Wire Ass'y	1	4P Shield
		TO307	J44715-030	Wire Ass'y	1	6P Shield
		TO306	J44716-021	Wire Ass'y	1	3P
		TO309	J44716-022	Wire Ass'y	1	3P
		TO806	J44717-021	Wire Ass'y	1	4P
		TO308	J44717-033R	Wire Ass'y	1	4P
		TO313	J44717-033Y	Wire Ass'y	1	4P
		TO305	J44717-035	Wire Ass'y	1	4P
		TO311	J44718-042	Wire Ass'y	1	4P
		TO805	J44719-024	Wire Ass'y	1	5P
		TO807	J44720-010	Wire Ass'y	1	6P
		TO802	J44721-016	Wire Ass'y	1	9P
		TO801	J44722-015	Wire Ass'y	1	10P
		TO312	J44722-028	Wire Ass'y	1	10P

⚠	Item No.	Symbol No.	Part No.	Part Name	Q'ty	Remarks
		TO3	J44722-034	Wire Ass'y	1	10P
		TO903	J44723-001	Wire Ass'y	1	
		TO906	J44724-001	Wire Ass'y	1	
		TO905	J44725-001	Wire Ass'y	1	
		B904	J44726-001	Wire Ass'y	1	
		<OTHERS>				
⚠	6		J44702-001 2×	Power Transformer	1	Continental Europe (220 V)
⚠			J44703-001	Power Transformer	1	U.K. only (240 V)
⚠	7		QMP3900-200H	Power Cord	1	Continental Europe
⚠			QMP9017-008BS	Power Cord	1	U.K. only

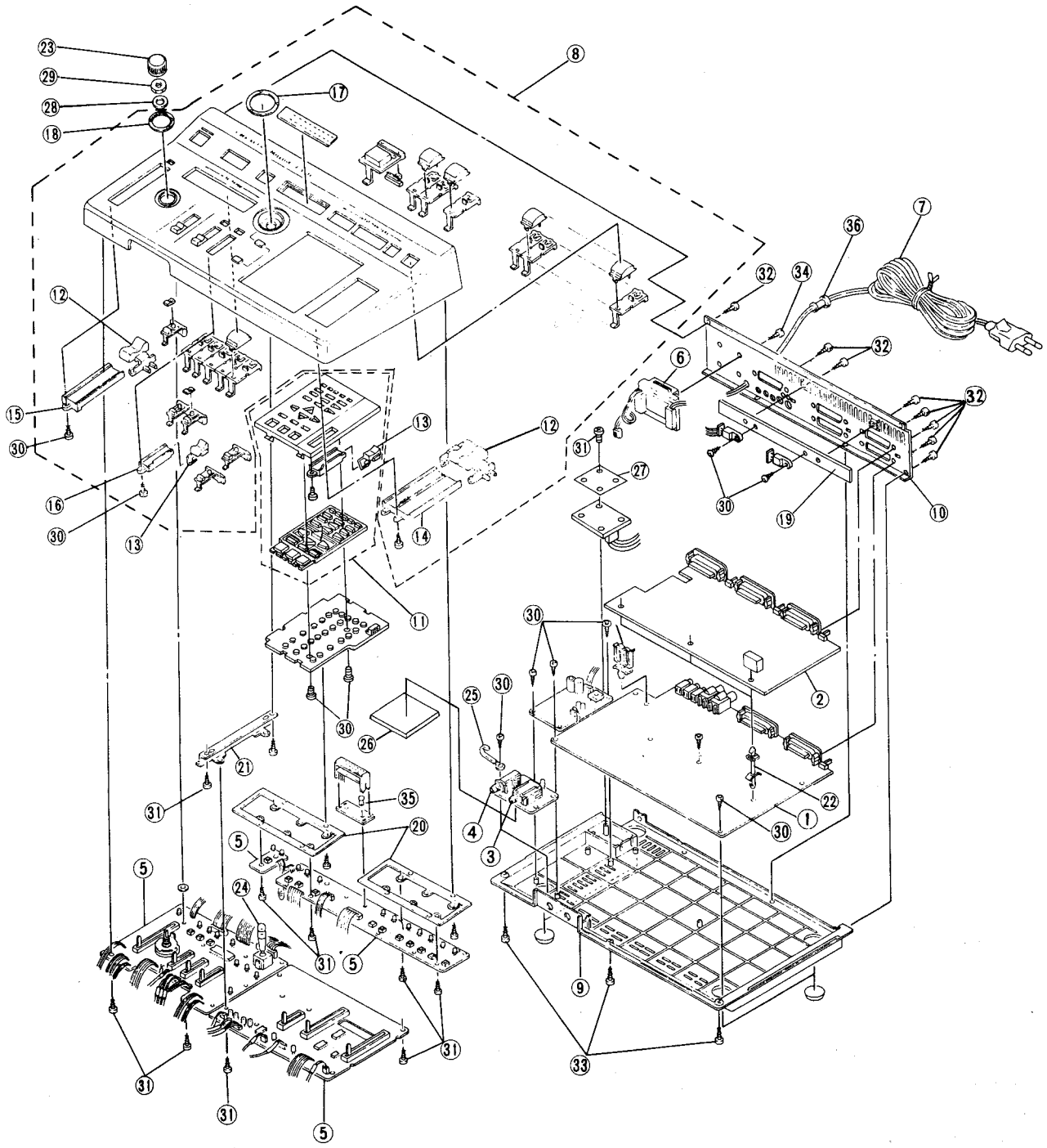
* Parts marked (⚠) are safety parts. When replacing, be sure to use the specified one.

13. Mechanical Parts List

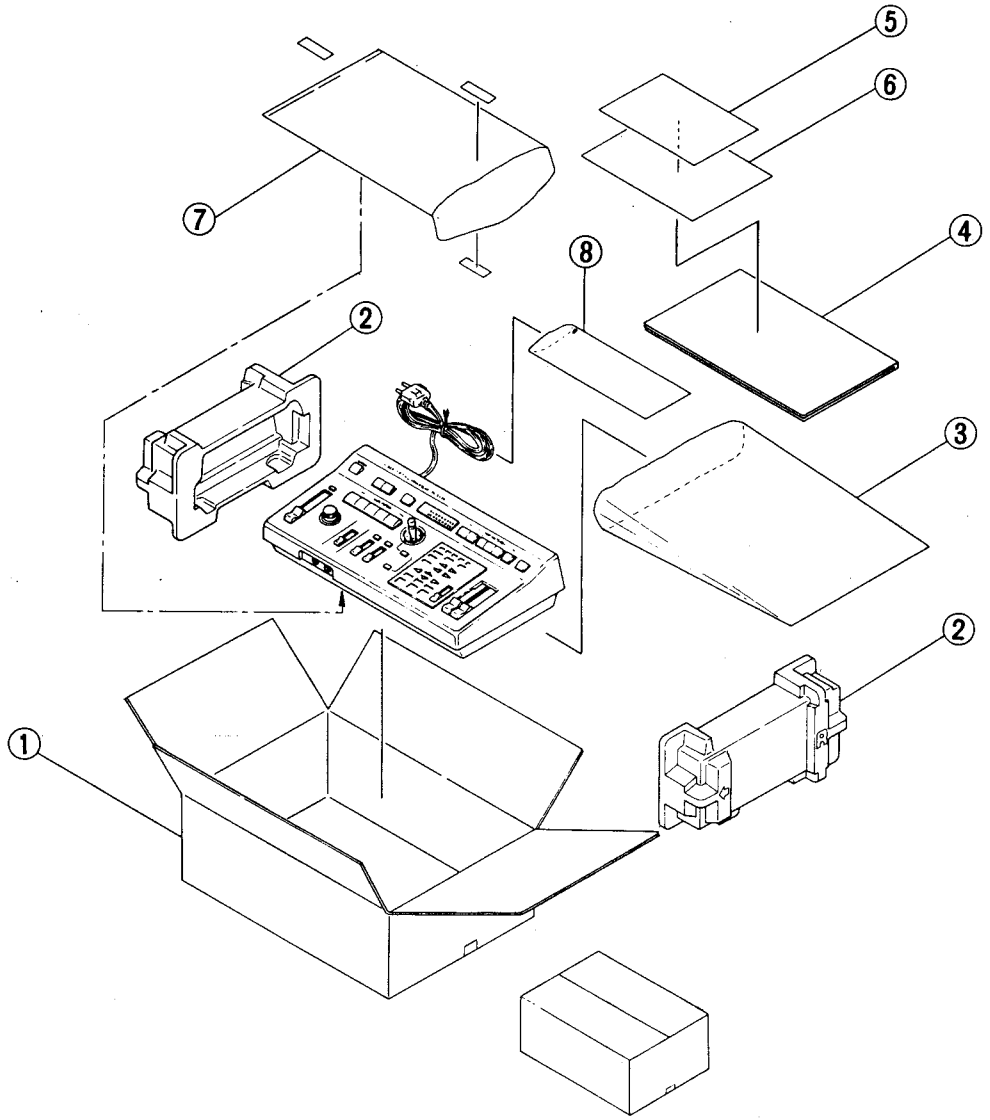
⚠	Item No.	Part No.	Part Name	Q'ty	Remarks
	8	J21194-003	Top cover Ass'y	1	Does not include panel Ass'y
	9	J21195-001	Chassis	1	Include foot
	10	J21221-001	Rear panel	1	For (E), (EB), models
		J21221-002	Rear panel	1	For (EK) models
	11	J21222-001	Panel Ass'y	1	
	12	J31815-001	Fader knob (Large)	3	
	13	J31816-001	Fader knob (Small)	4	
	14	J31817-001	Plate (Large)	1	
	15	J31818-001	Plate (Middle)	1	
	16	J31819-001	Plate (Small)	4	
	17	J44425-001	Ring plate A	1	For joy stick
	18	J44426-001	Ring plate B	1	For back color
⚠	19	J31820-001	Heatsink	1	
	20	J31821-001	PCB holder A	2	For control 2, 3 board
	21	J31822-001	PCB holder B	1	For control 1 board
	22	J44427-001	Locking card spacer	3	KGLS-14S
	23	J44429-001	Back color knob	1	
	24	J44430-001	Joy stick knob	1	
	25	J44151-001	Wire cramp	1	
	26	J31920-001	Shield plate A	1	For jack-PCB
	27	J31921-001	Shield plate B	1	For filter-PCB
	28		Washer	1	To be attached to rotary switch (J44411-001)
	29		Nut	1	
	30	SBSE3008Z	Screw	19	
	31	SDSB3010Z	Screw	38	
	32	SDSF3008M	Screw	21	
	33	SDSF3012M	Screw	3	For the front side of the upper cover
	34	SDST4008M	Screw	4	For transformer
	35	J44482-001	Niron rivet	2	
⚠	36	QHS3876-162	Cord stopper	1	SR-4N-4

* Parts marked (⚠) are safety parts. When replacing, be sure to use the specified one.

14. Exploded View



15. Packing Materials and Parts Numbers



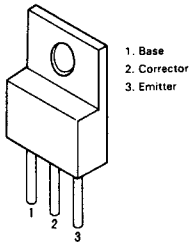
⚠	Item No.	Part Number	Part Name	Q'ty	Remarks
	1	PK-JXSV77E	Packing Case	1	J21220-001 for (E) models
		PK-JXSV77EB	Packing Case	1	J21220-002 for (EB) models
		PK-JXSV77EK	Packing Case	1	J21220-004 for (EK) models
	2	NS-JXSV55	Packing Pad	1 set	J21186-001
	3	J44087-001	Envelope	1	For (E), (EB), models
			Envelope	1	For (EK) models

Accessories List

⚠	Item No.	Part Number	Part Name	Q'ty	Remarks
	4	J5500-044A	Instructions	1	
	5	BT20060	Warranty Card	1	For (EK) models
	6	BT20066A	EEC Agency	1	
	7	QPGA025-03505	Envelope	1	For Printed Materials
	8	QPGA025-02305	Envelope	1	For Power Cord

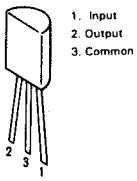
16. Block View Inside IC

Transistor



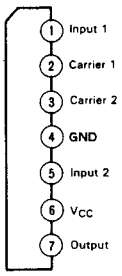
Q901 2SD1406
Q902 2SB1015

3-Terminal Voltage Regulator



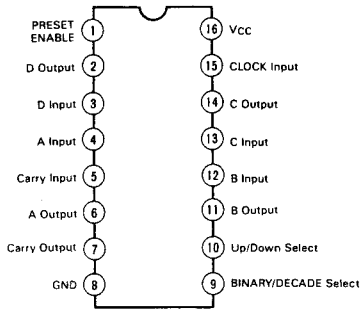
IC902, 903
μPC78L05J

Double Balanced Modulator



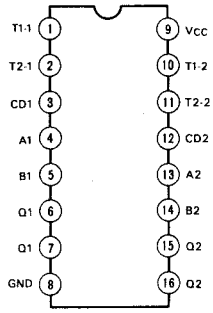
IC304, 305, 307, 309, 311, 10
AN614

Up/Down Counter



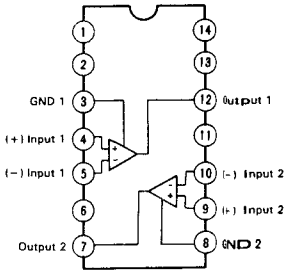
IC316
TC4029BP

Dual Monostable Multivibrator



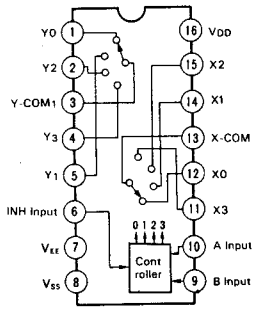
IC312, 313, 314, 318
319, 320, 334
T4538BP

Voltage Comparator



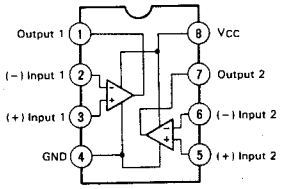
IC325
μPC319C

4-ch Analog Switcher



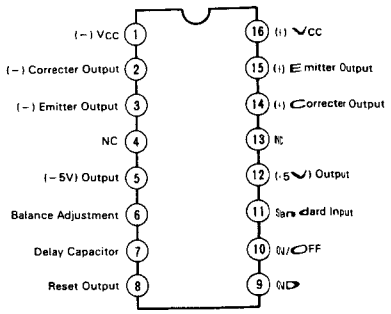
IC817, 809
TC4052BP

Dual Operational Amplifier



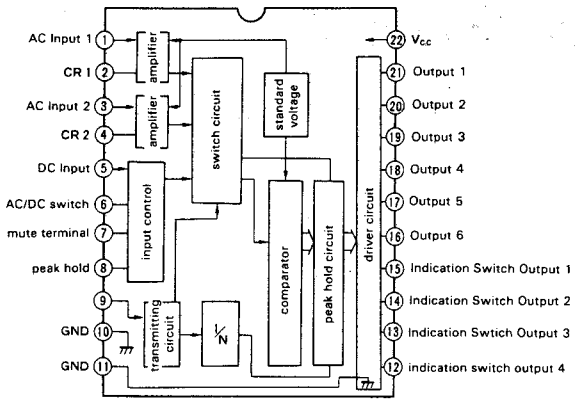
IC802, 805, 807, 810
811, 812, 813, 814
815, 819, 820, 821
822, 311, 7
BA15218 or M5218P

Voltage Regulator



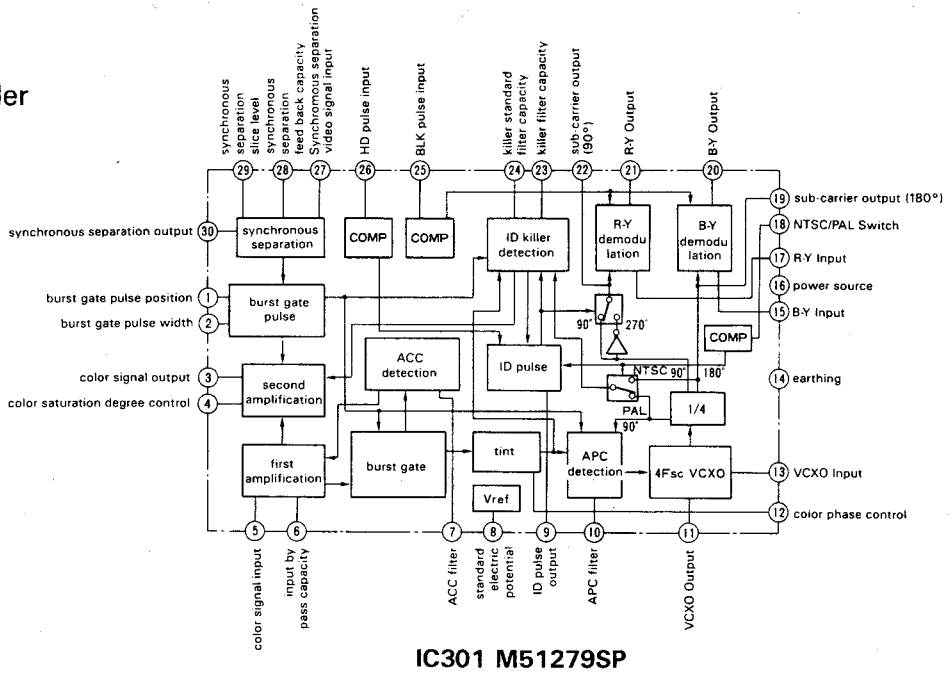
IC901
M5290P

Level Meter Driver



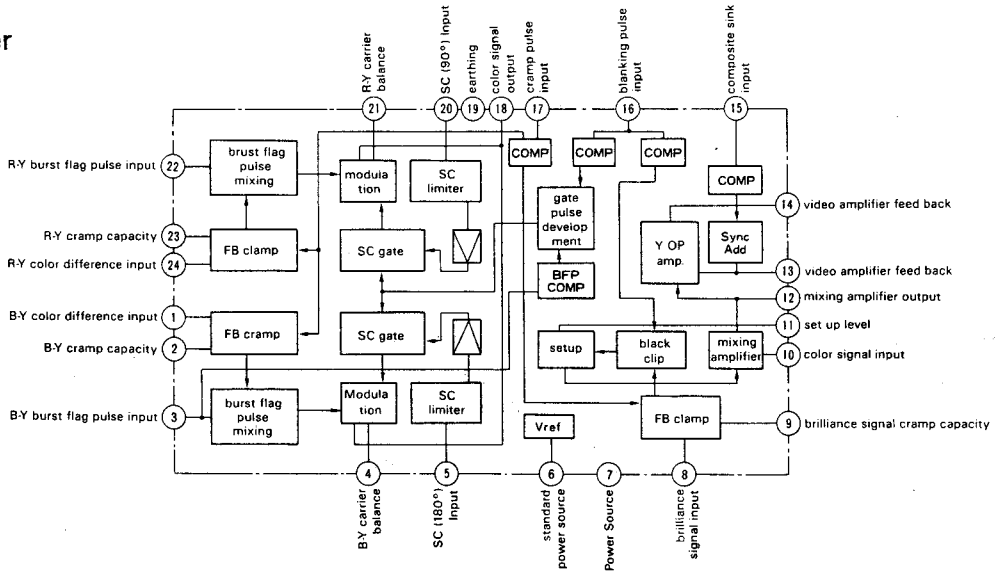
Level Meter L1-1242V
(Inside LSI BA6820F)

PAL Decoder



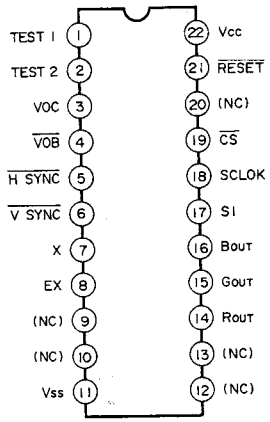
IC301 M51279SP

PAL Encoder



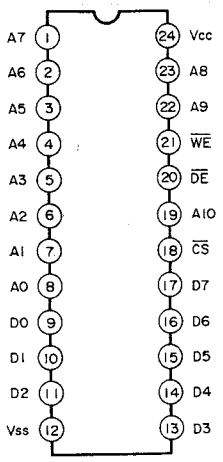
IC302 M51272P

TV Display Controller (Character Gegerator)



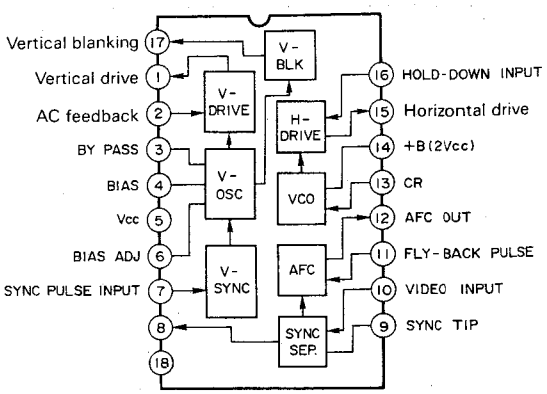
IC329
MB89012-106

2K byte SRAM



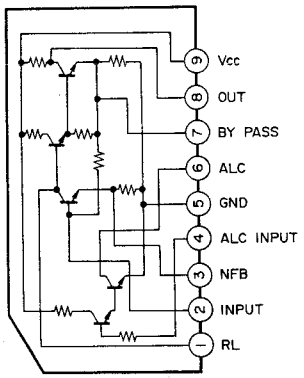
IC328
BR6116-100

TV Deflection Signal Processor



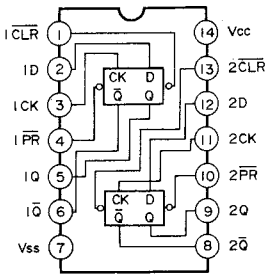
IC332
HA11423

Mic. Amplifier with ALC



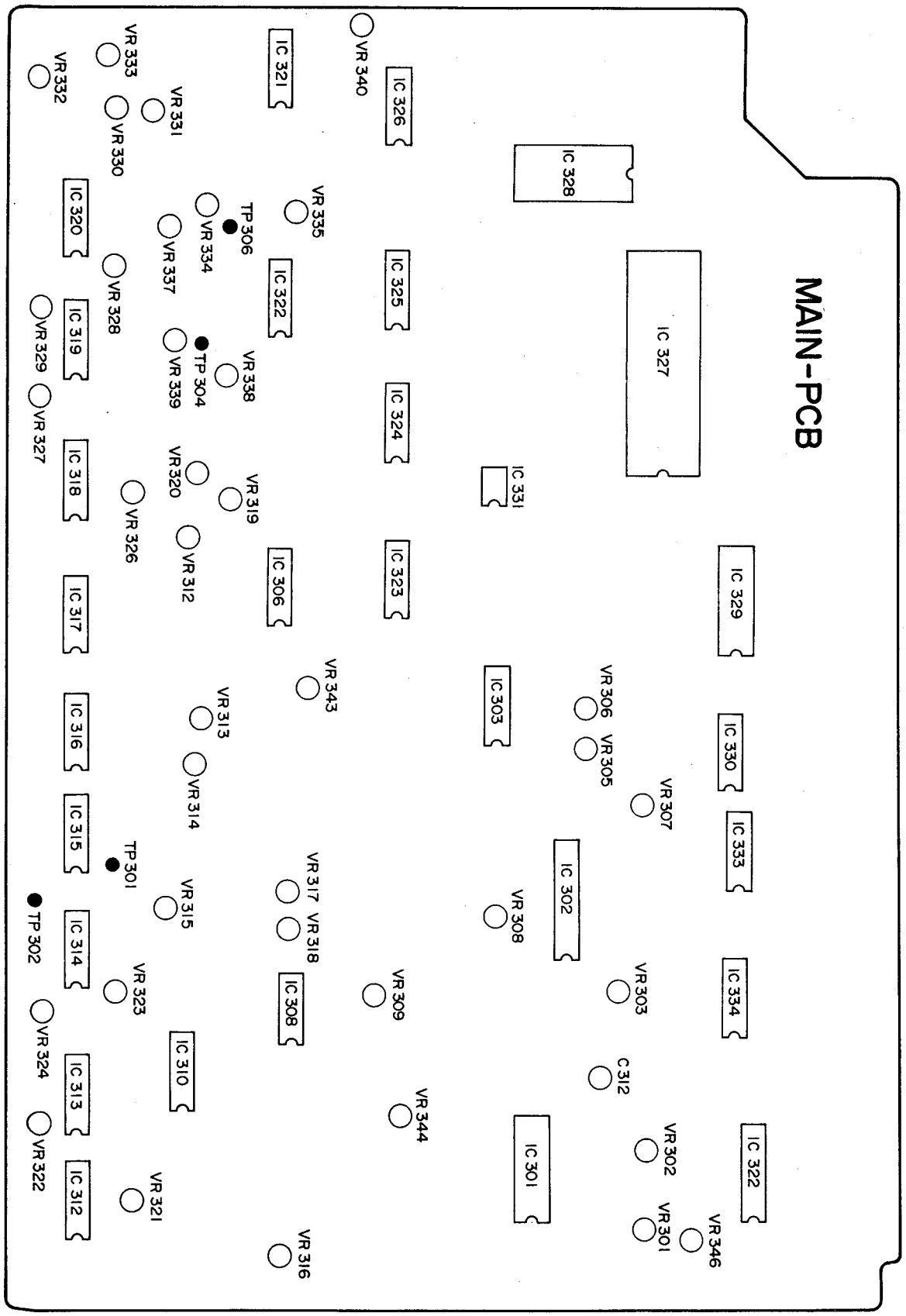
IC803
LA3210

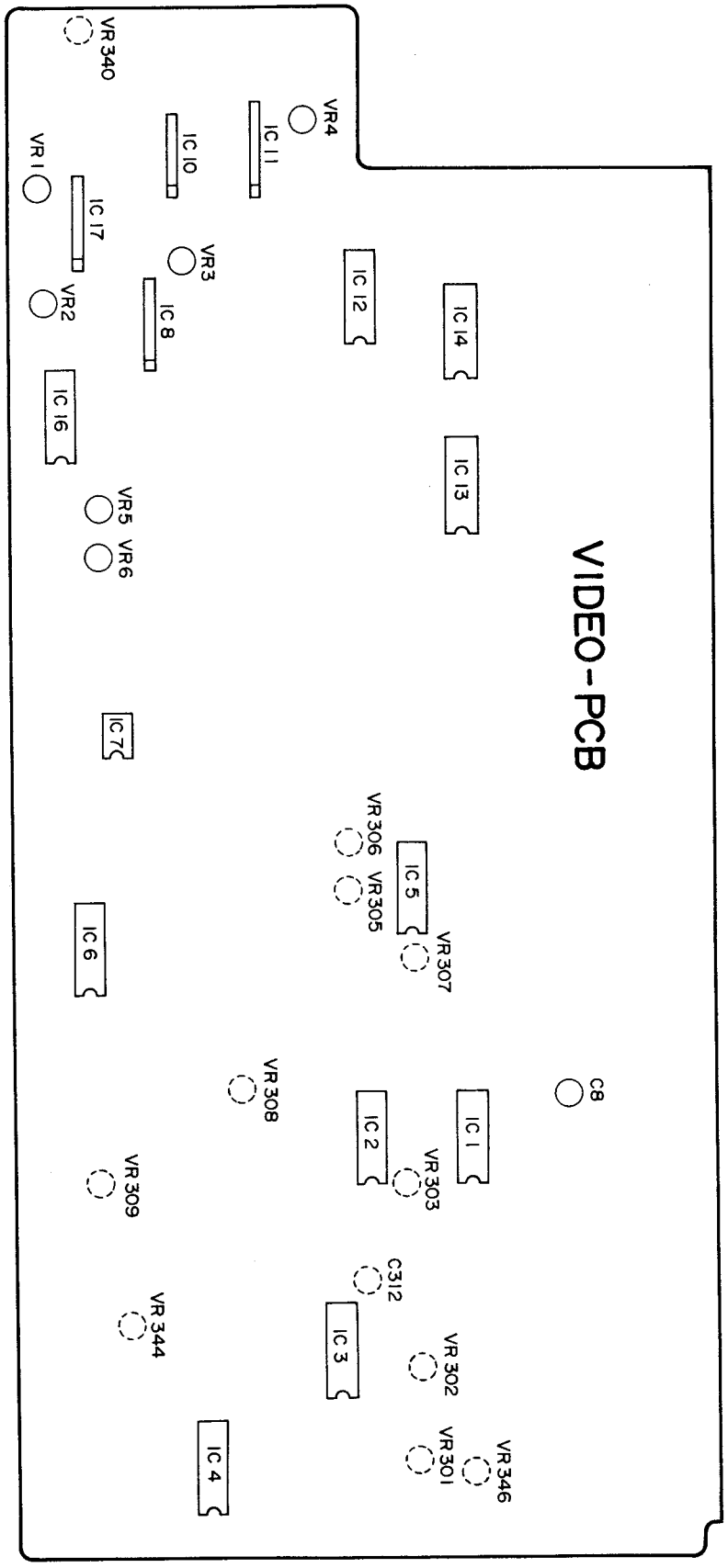
Dual D Flip Flop



IC333
TC74HC74P

17. Arrangement Plan of IC and Adjustment Points




VIDEO-PCB
VR 340
VR4
IC 11
IC 10
VR 1
IC 17
VR3
VR2
IC 8
IC 12
IC 14
IC 16
IC 13
VR5
VR6
IC 7
VR 306
VR 305
IC 5
VR 307
IC 6
VR 308
C8
IC 1
IC 2
VR 303
VR 309
C312
IC 3
VR 344
VR 302
VR 346
VR 301
IC 4

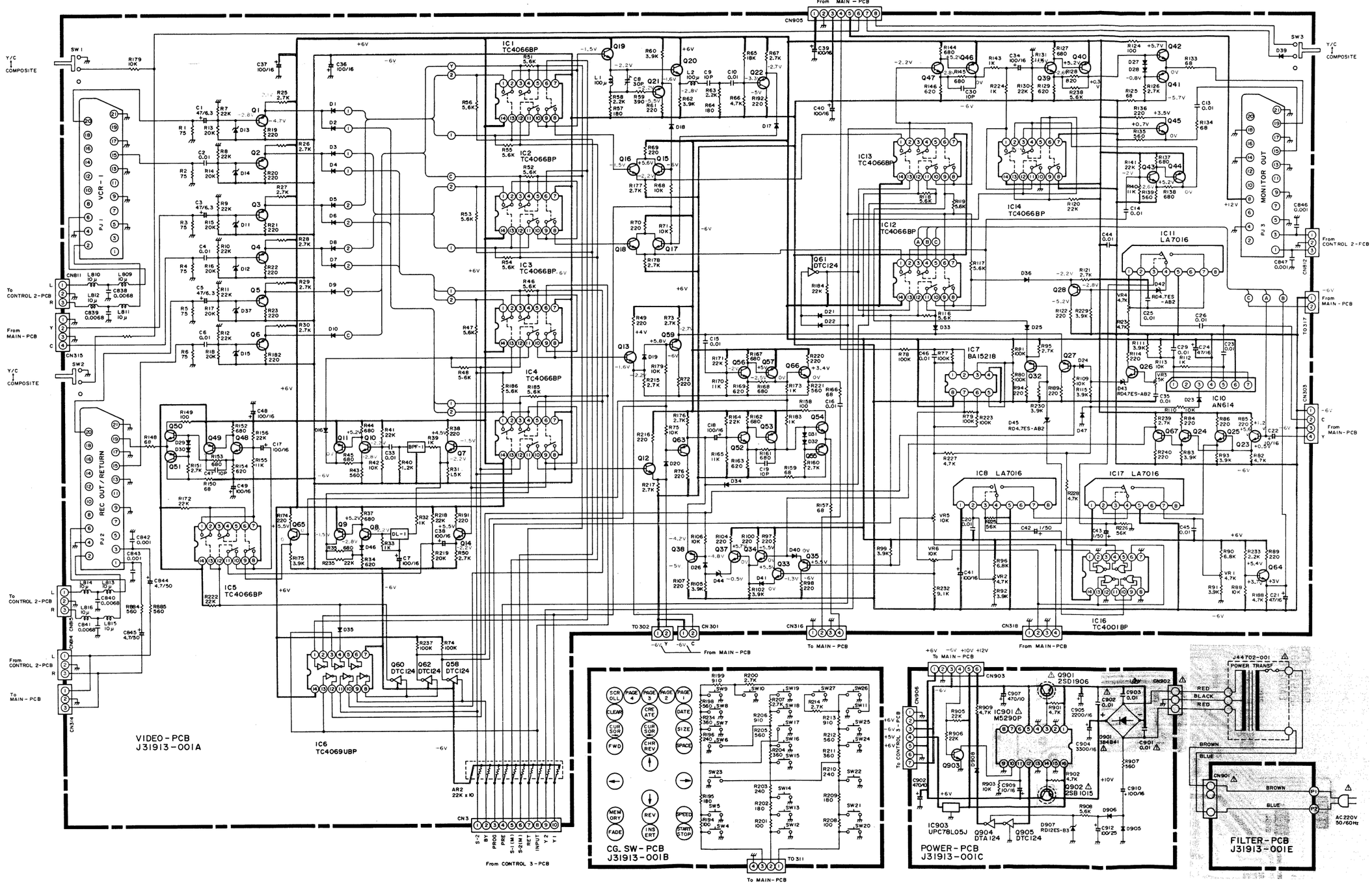
—MEMO—

Schematic Diagram (Video & Power Circuit)

● **Use of Schematic Diagram**

Notes:

1. ——— shows the B (+) power supply.
2. ——— shwos the B (−) power supply.
3. Values printed in red show the voltae of each section of the circuits as measured by a tester (having an internal resistance of 20 kohms/V) with the power switch turned ON.
4. Parts marked with ⚠ (in the shaded areas ▨) are safety parts. When replacing these, be sure to use only the designated parts to ensure safety.
5. This is a standard circuit diagram.
   Design and contents are subject to change without notice.



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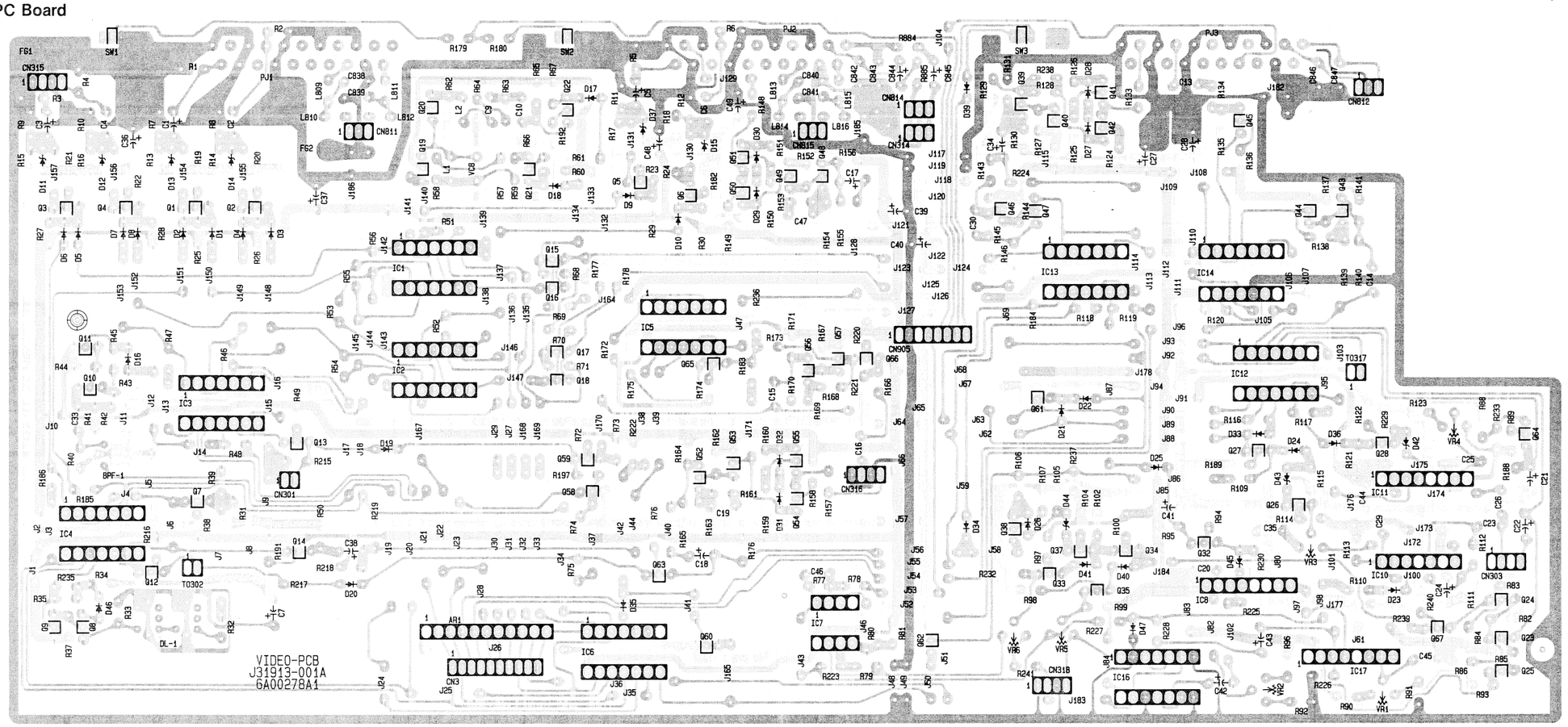
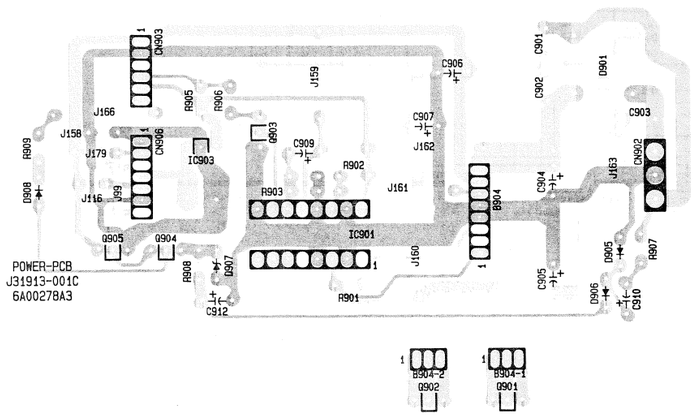
Printed Circuit Board (Full Scale)

part is (+) B power source.
part is (−) B power source.
part is earth.
parts are others.

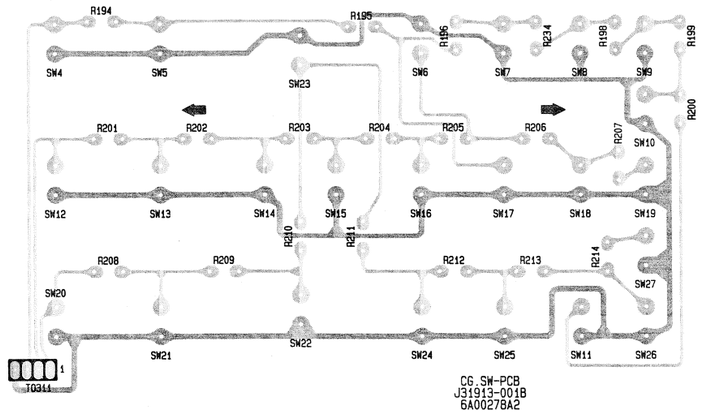
■ Video PC Board



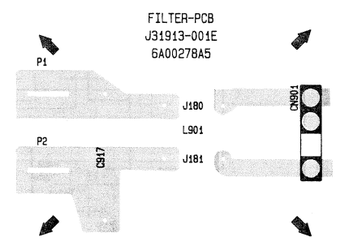
■ Power PC Board



■ CG. SW PC Board



■ FILTER PC Board



Schematic Diagram (Control Circuit)

● **Use of Schematic Diagram**

Notes:

1. ———— shows the B (+) power supply.
2. ~~~~~~~~ shwos the B (−) power supply.
3. Values printed in red show the voltae of each section of the circuits as measured by a tester (having an internal resistance of 20 kohms/V), with the power switch turned ON.
4. Parts marked with ⚠ (in the shaded areas ▒▒▒) are safety parts. When replacing these, be sure to use only the designated parts to ensure safety.
5. This is a standard circuit diagram. Design and contents are subject to change without notice.

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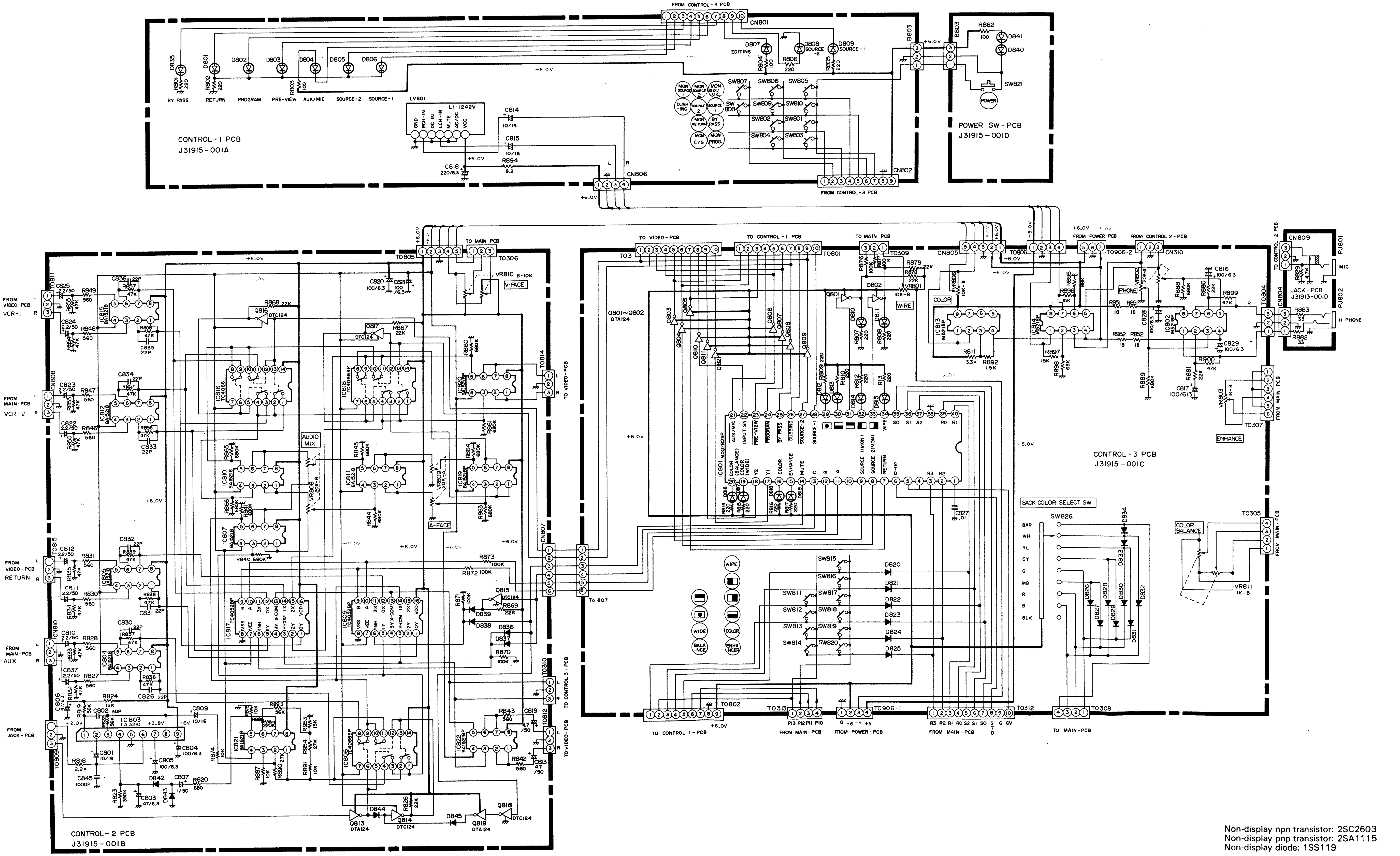


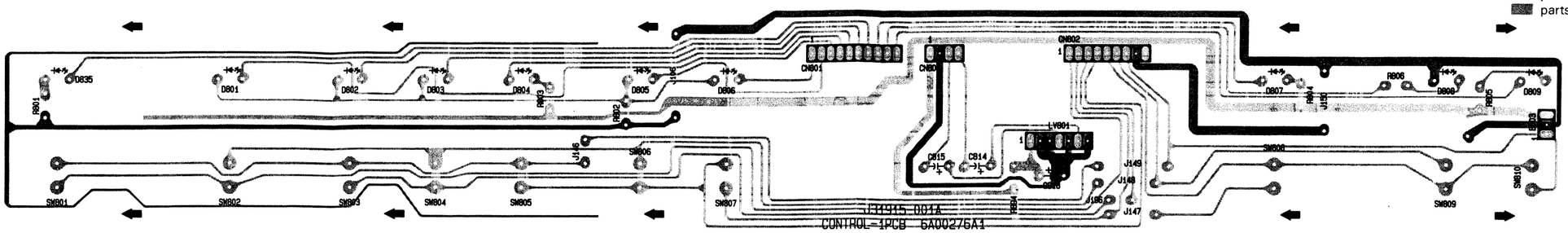
FROM CONTROL-3 PCB
CN801
CONTROL-1 PCB
J31915-001A
BY PASS
RETURN
PROGRAM
PRE-VIEW
AUX/MIC
SOURCE-2
SOURCE-1
LV801
LI-1242V
EDITINS
CN806
CN802
FROM CONTROL-3 PCB
POWER SW-PCB
J31915-001D
SW821
POWER
TO MAIN PCB
TO VIDEO-PCB
TO CONTROL-1 PCB
V-FACE
AUDIO MIX
A-FACE
WIRE
COLOR
PHONE
ENHANCE
FROM POWER-PCB
FROM CONTROL 2-PCB
TO CONTROL-2 PCB
JACK-PCB
J31913-001D
MIC
H. PHONE
FROM VIDEO-PCB VCR-1
FROM MAIN-PCB VCR-2
FROM VIDEO-PCB RETURN
FROM MAIN-PCB AUX
FROM JACK-PCB
CONTROL-2 PCB
J31915-001B
CONTROL-3 PCB
J31915-001C
BACK COLOR SELECT SW
SW826
BAR
WH
YL
CY
G
MG
R
B
BLK
COLOR BALANCE
FROM MAIN-PCB
TO CONTROL-3-PCB
To 807
TO CONTROL I-PCB
FROM MAIN-PCB
FROM POWER-PCB
TO MAIN-PCB

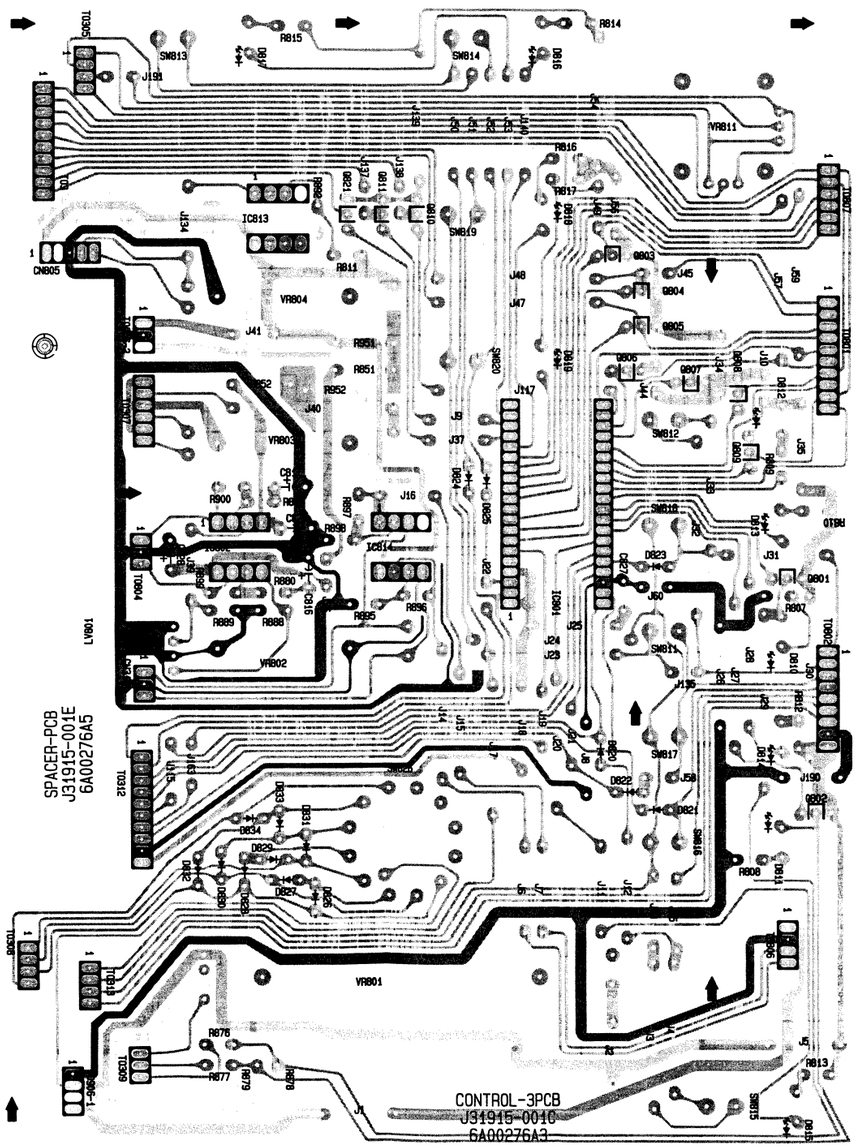
Non-display npn transistor: 2SC2603
Non-display pnp transistor: 2SA1115
Non-display diode: 1SS119

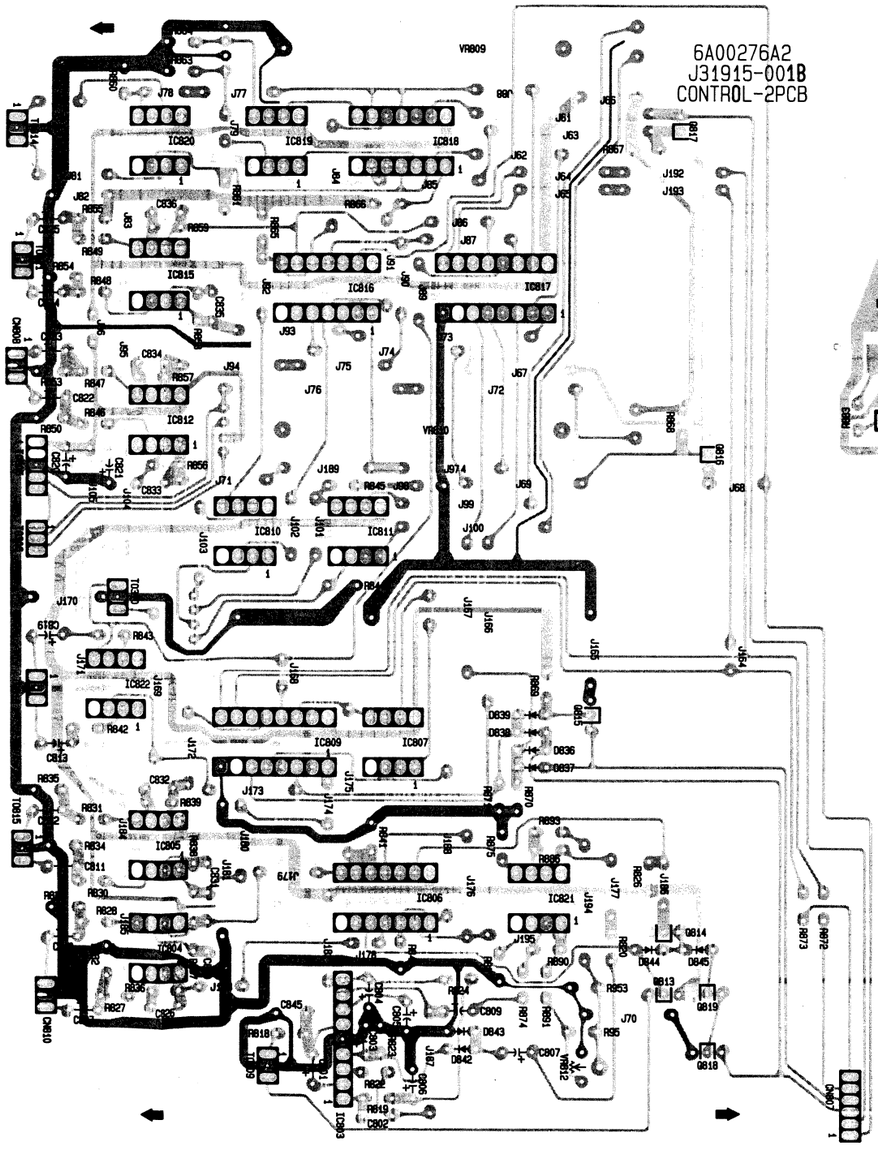
Printed Circuit Board (Full Scale)

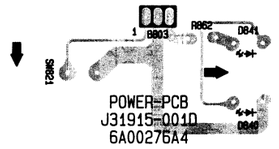
■ Control-1 PC Board

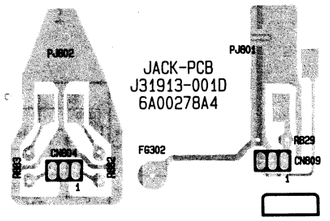
part is (+) B power source.
part is (−) B power source.
part is earth.
parts are others.









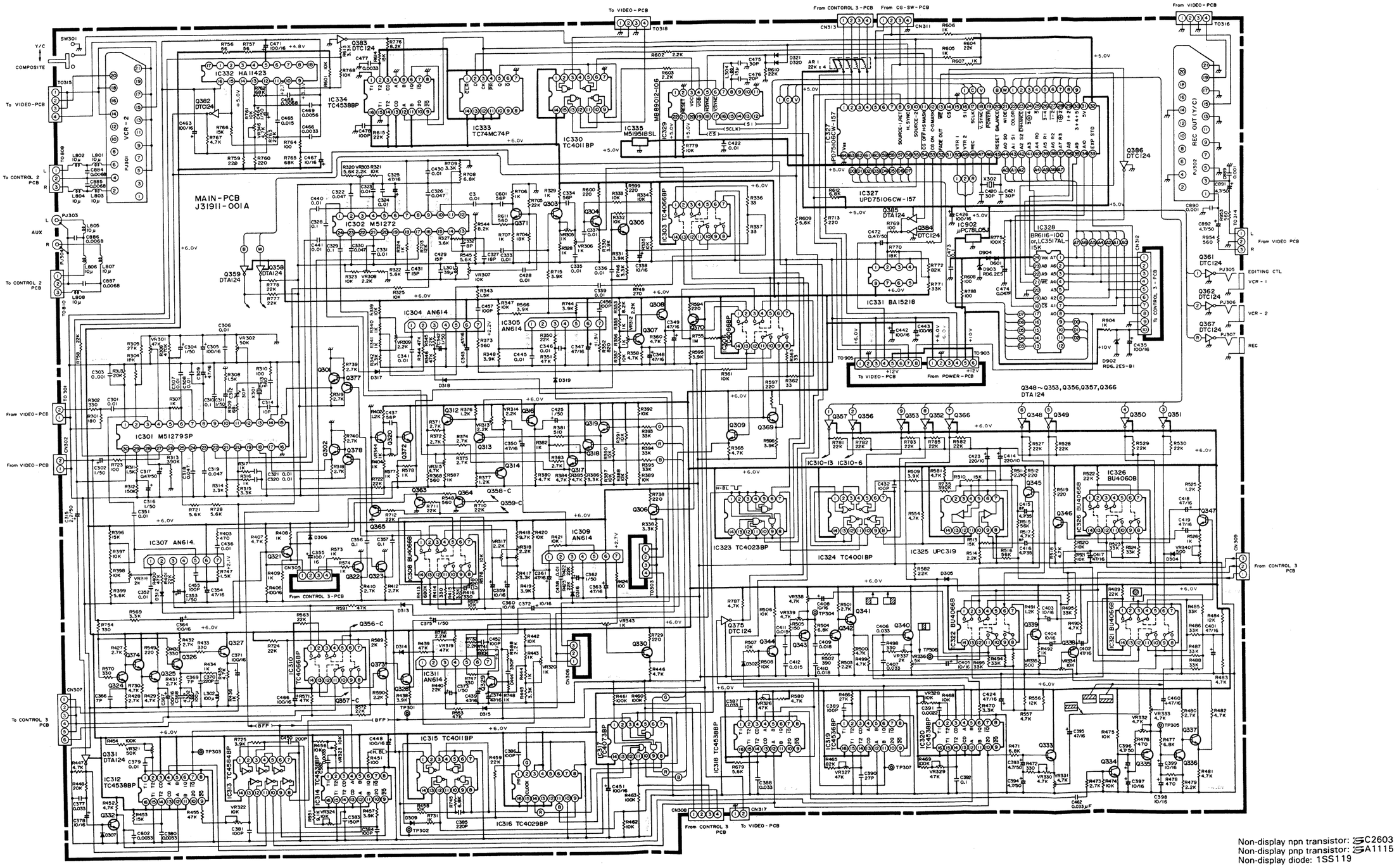


Schematic Diagram (Main Circuit)

● Use of Schematic Diagram

Notes:

1. ——— shows the B (+) power supply.
2. ~~~~~ shwos the B (−) power supply.
3. Values printed in red show the voltae of each section of the circuits as measured by a tester (having an internal resistance of 20 kohms/V), with the power switch turned ON.
4. Parts marked with ⚠ (in the shaded areas ▨▨▨▨) are safety parts. When replacing these, be sure to use only the designated parts to ensure safety.
5. This is a standard circuit diagram.
   Design and contents are subject to change without notice.



Non-display npn transistor: ▨C2603
Non-display pnp transistor: ▨A1115
Non-display diode: 1SS119

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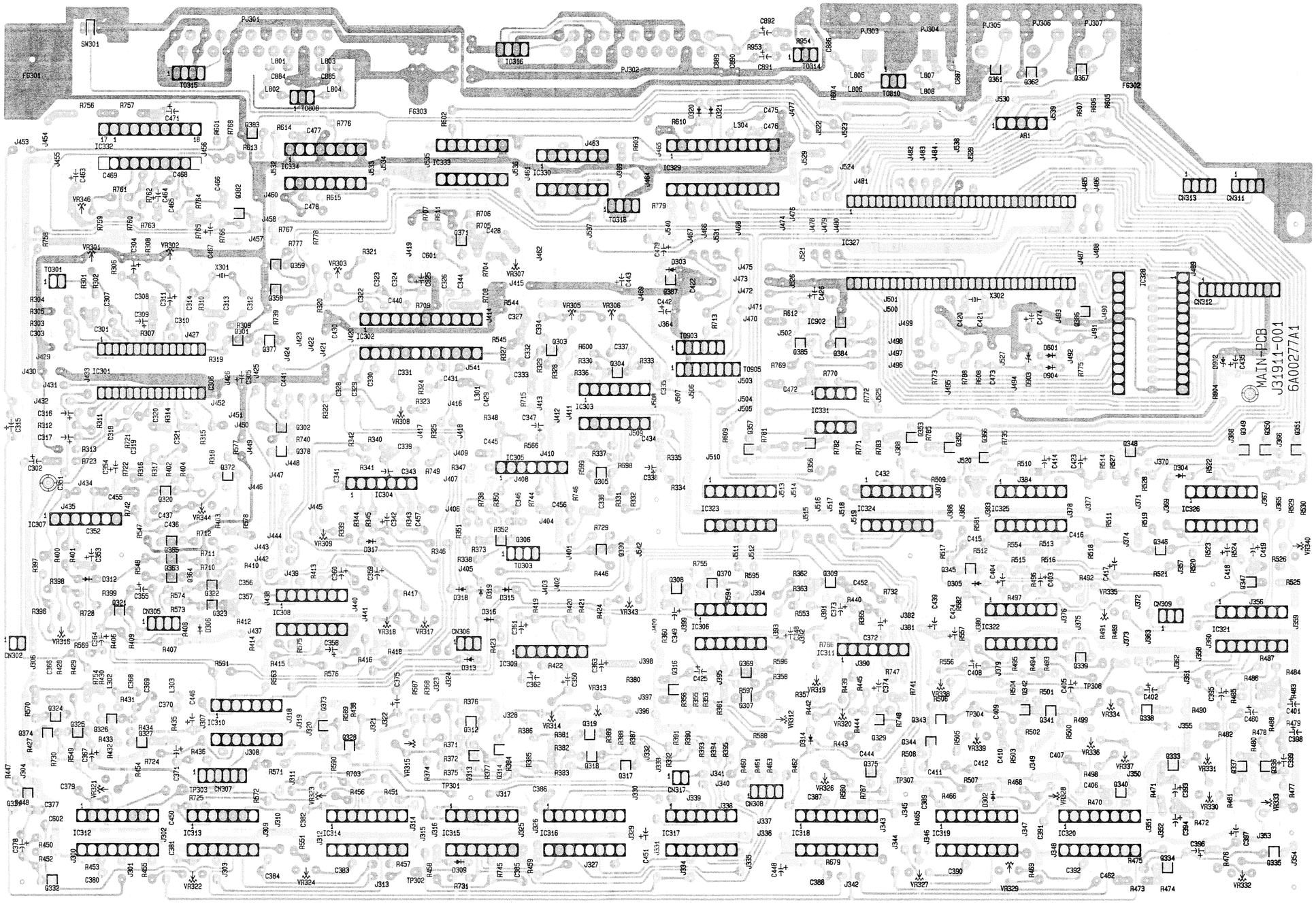
Printed Circuit Board (Full Scale)

part is (+) B power source.
part is (−) B power source.
part is earth.
parts are others.

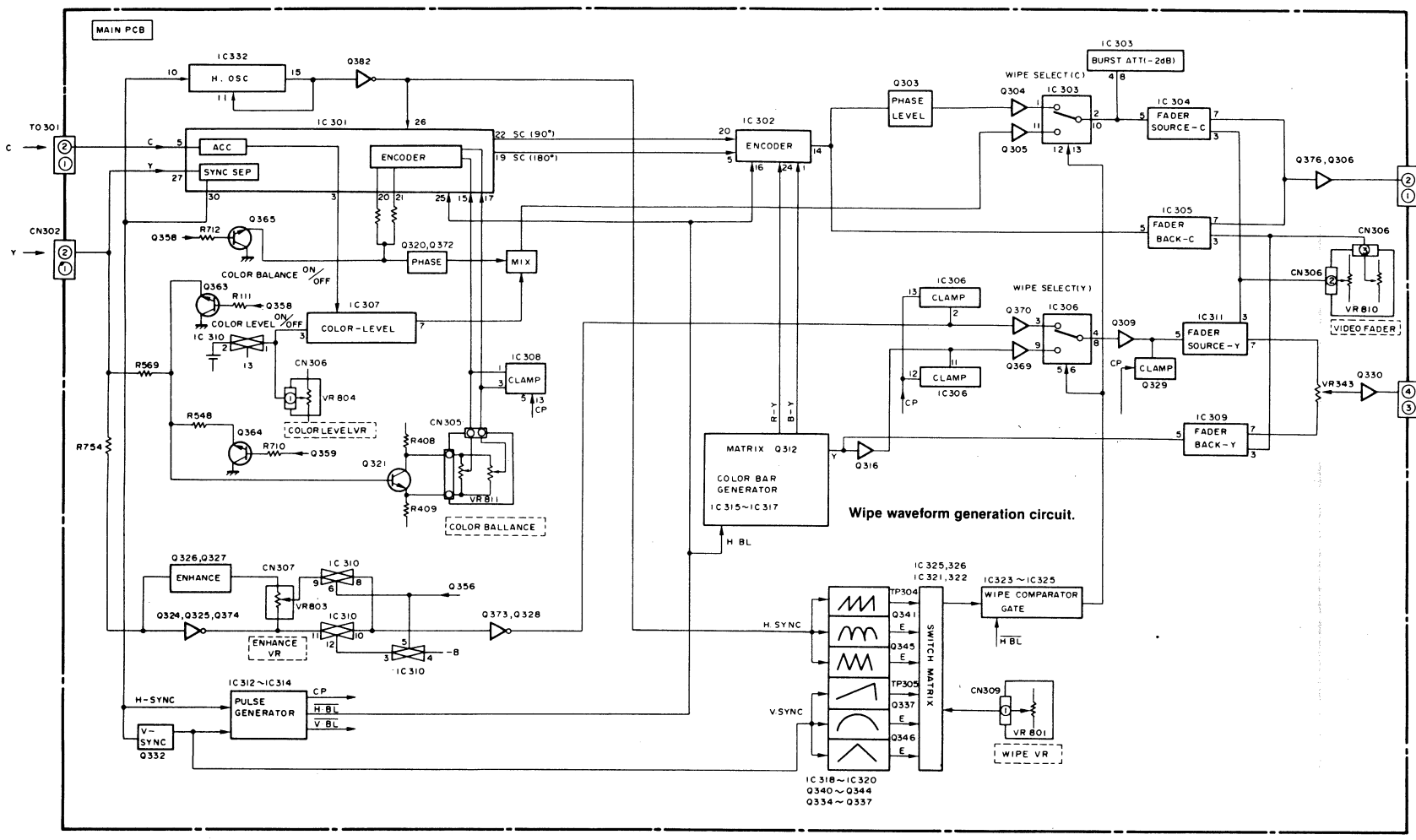
■ Main PC Board



Block Diagram

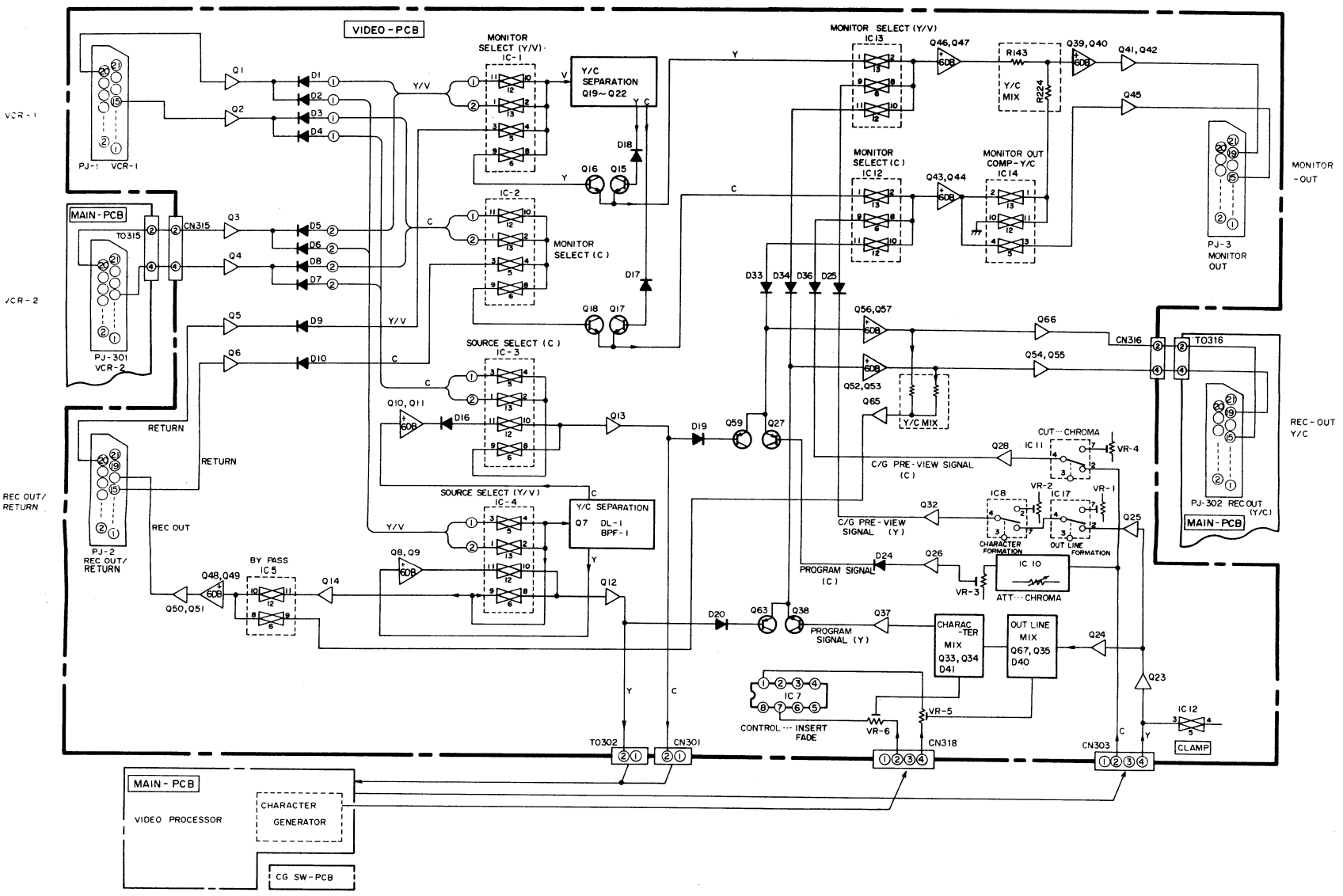
Note No. : IC pin No.
▷: Buffer amp
⋈: Analog switch

■ Main PC Board Block Diagram



■ Video PC Board Block Diagram

Note No. : IC pin No.
▷: Buffer amp
⋈: Analog switch

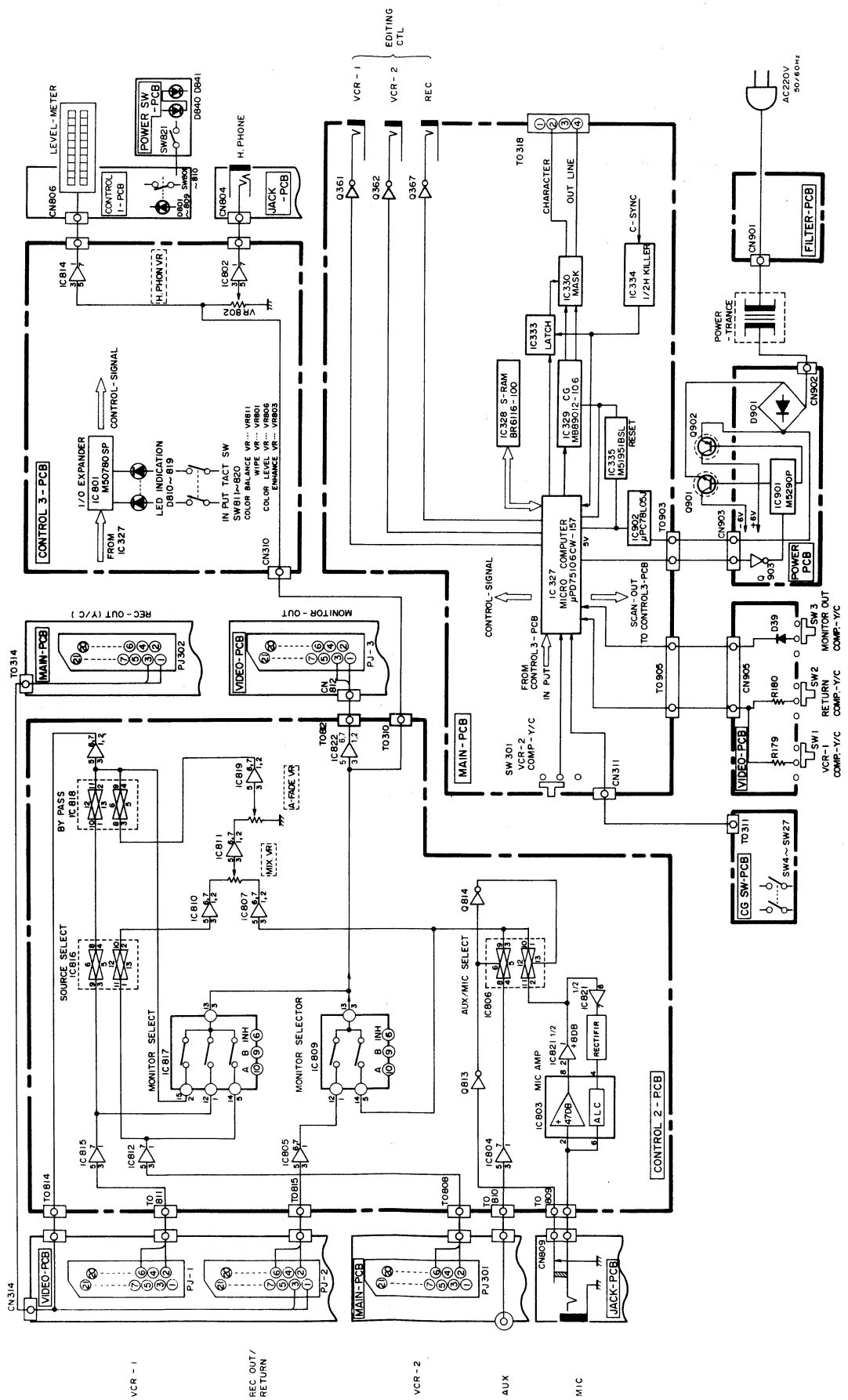


■ Control PC Board and Power Block Diagram

Note No. : IC pin No.
( ) or lower level display is on R channel
▷: Buffer amp
⋈: Analog switch

■ Control PC Board and Power Block Diagram

Note No. : IC pin No.
( ) or lower level display is on R channel
Buffer amp
Analog switch



Logic Truth Tables

	SIGNAL LINE \ CONTROL GATE	NAME	SOURCE-SELECT		BY-PASS		MONITOR-SELECT						AUX/MIC SELECT	
			1CH	2CH			A	B	1kH	A	B	1MH	AUX	MIC
AUDIO	IC NO. & PIN NO. SOUND	L	IC816 6	← 12	IC818 12	← 6	IC817 10	← 9	← 6	IC809 10	← 9	← 6	IC806 6	← 12
		R	IC816 5	← 13	IC818 13	← 5	IC817 10	← 9	← 6	IC809 10	← 9	← 6	IC806 5	← 13
	SOURCE-SELECT	1 CH	H	L										
		2 CH	L	H										
	BY-PASS	ON			H	L								
		OFF			L	H								
	MONITOR-SELECT	1 CH					L	L	L			H		
		2 CH					H	L	L			H		
		AUX/MIC							H	H	L	L		
		PRE./PRO.					L	H	L			H		
		RETURN							H	L	L	L		
	AUX/MIC SELECT	AUX											H	L
		MIC											L	H

	SIGNAL LINE \ CONTROL GATE	NAME	SOURCE-SELECT				BY-PASS		MONITOR-SELECT							COMMON GATE		
			1 CH	2 CH					1CH	2 CH	RET		PRE	PRO				
VIDEO	IN NO. & PIN NO. SOUND	COMPOSITE /Y	IC4 5	← 13	← 12	← 6	IC5 12	← 6	IC1 12	← 13	← 5	← 6	IC13 6	← 12	← 13	IC14 13	← 12	
		C	IC3 5	← 13	← 12	← 6			IC2 12	← 13	← 5	← 6	IC12 6	12	13			IC14 5
	SOURCE-SELECT	1 CH	H		L*1	H*2	L	H										
		2 CH		H			L	H										
	BY-PASS	ON					L*3	H*4										
		OFF					L	H										
	MONITOR-SELECT	1 CH							H						H			
		2 CH								H		*5			H	*8	*9	
		RETURN									H				H			
		PRE VIEW											H			L*6	H*7	
		PROGRAM												H				

WIPE	CONTROL GATE / WIPE PATTERN	IC322 12	← 13	← 5	← 6	IC321 12	← 6	← 5	IC326 6	← 12
	■□	H	L	H	L					
	■■	H	H	L	L					
	◧□	L	H	L	H					
	▬□					L	L	H	L	H
	▬■					L	H	L	H	L
	▬▬					H	L	L	H	L
	●	L	H	L	L	L	L	H	H	L

*1, 2, 3, 4...Inverts when Channel Select input SW is positioned at Composite side.
*6, 7...Inverts when output switch is positioned at Composite side.

*8, 9

I SW	O SW	*8	*9
Y/C	Y/C	L	H
Y/C	COMPO	H	L
COMPO	Y/C	L	H
COMPO	COMPO	L	H

*5

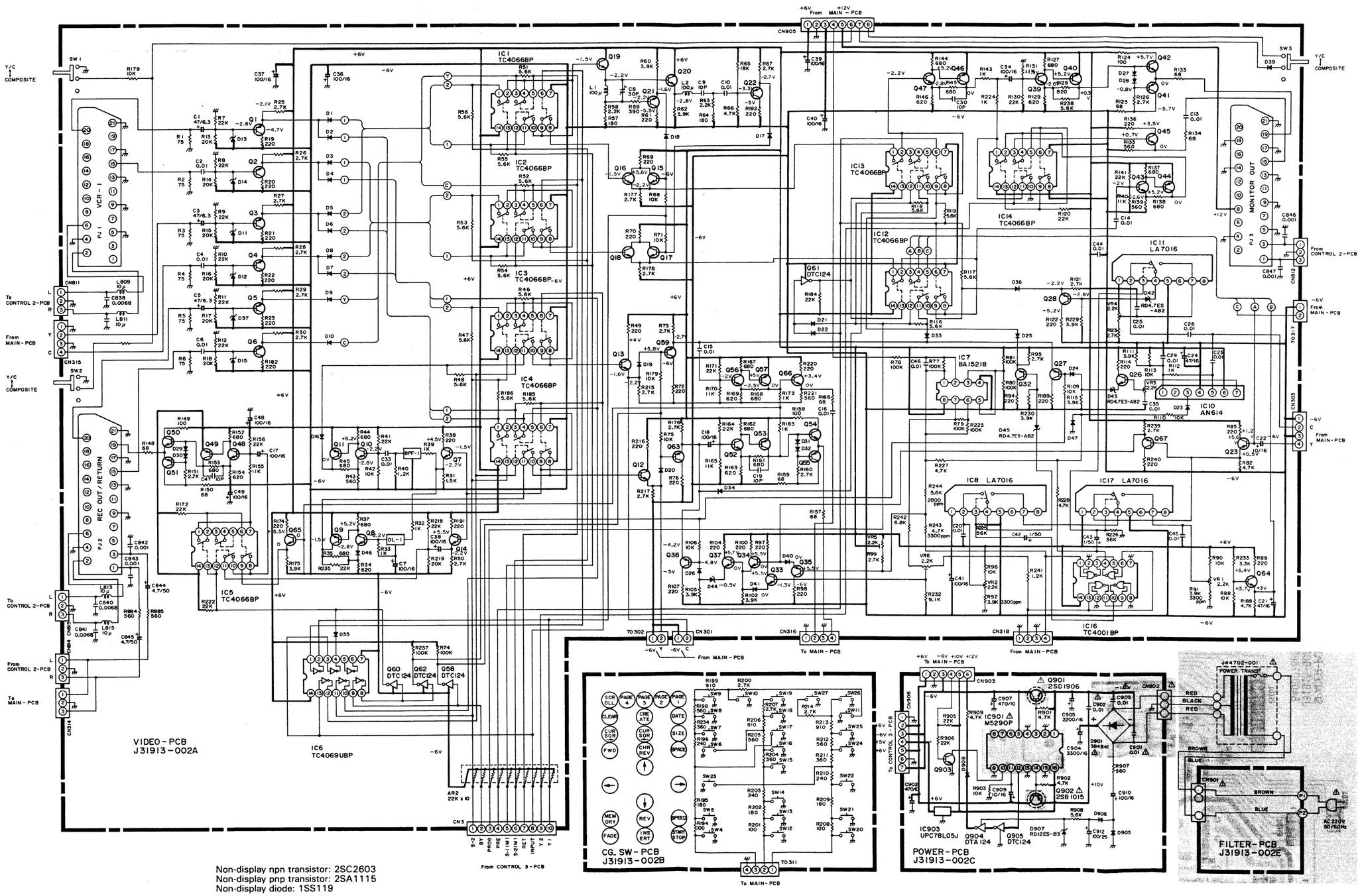
I SW	O SW	*5
Y/C	Y/C	H
Y/C	COMPO	H
COMPO	Y/C	L
COMPO	COMPO	H

Schematic Diagram (Video & Power Circuit)

● **Use of Schematic Diagram**

Notes:

1. ——— shows the B (+) power supply.
2. ——— shwos the B (−) power supply.
3. Values printed in red show the voltae of each section of the circuits as measured by a tester (having an internal resistance of 20 kohms/V), with the power switch turned ON.
4. Parts marked with ⚠ (in the shaded areas ▒▒) are safety parts. When replacing these, be sure to use only the designated parts to ensure safety.
5. This is a standard circuit diagram. Design and contents are subject to change without notice.



Non-display npn transistor: 2SC2603
Non-display pnp transistor: 2SA1115
Non-display diode: 1SS119

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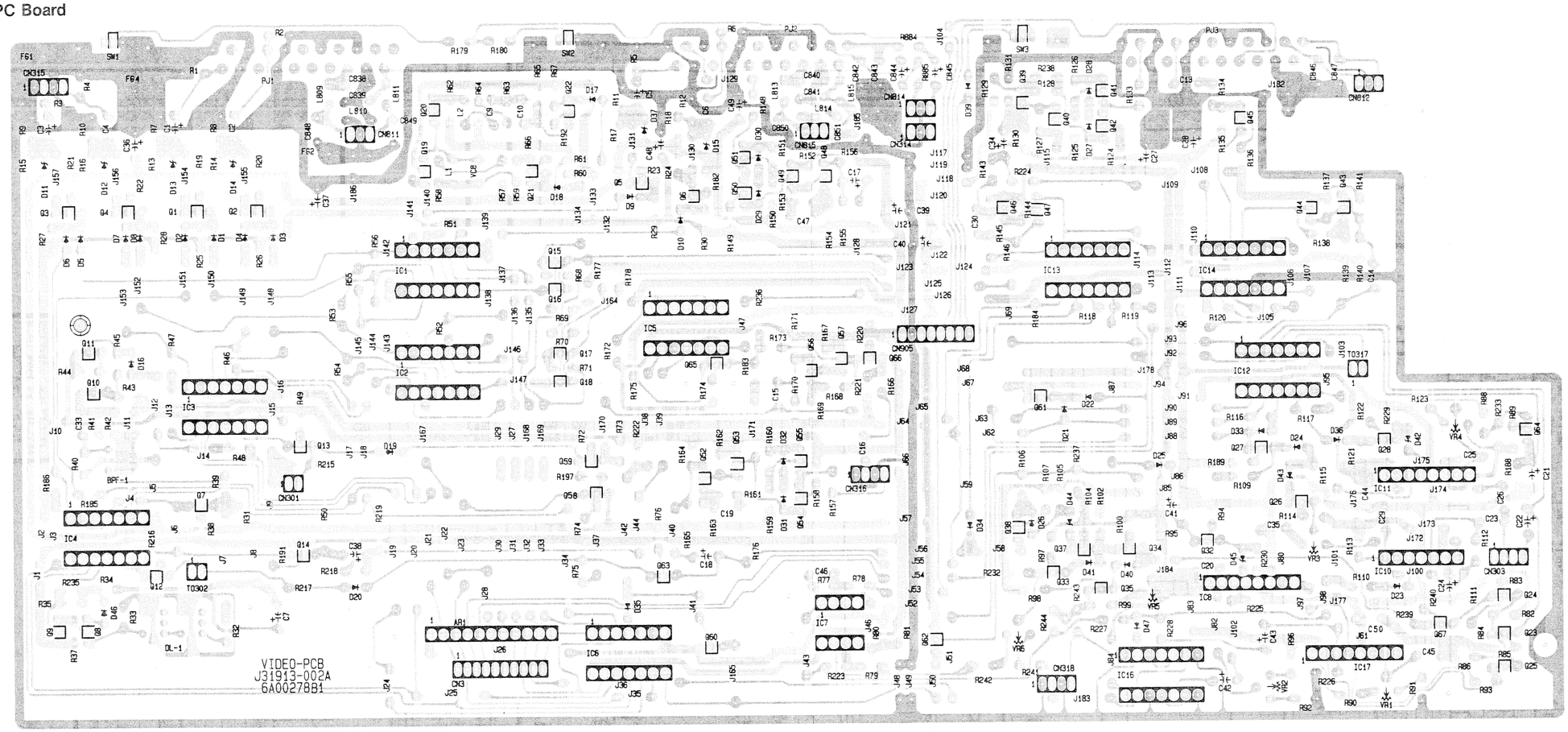
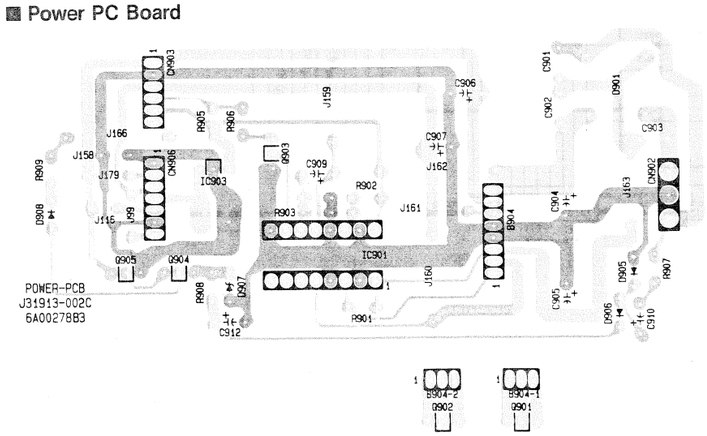
Printed Circuit Board (Full Scale)

part is (+) B power source.
part is (−) B power source.
part is earth.
parts are others.

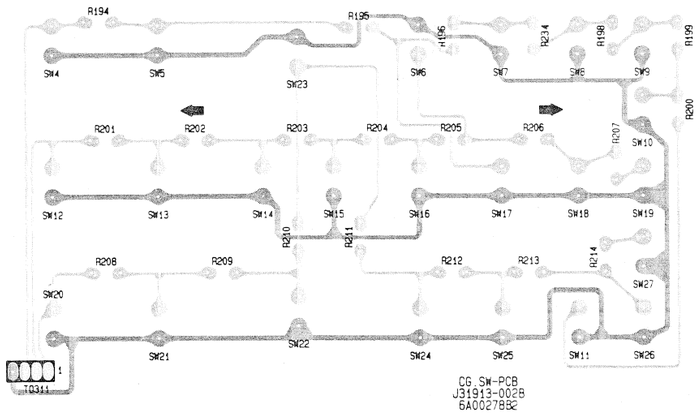
■ Video PC Board



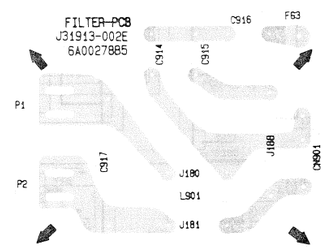
■ Power PC Board



■ CG. SW PC Board



■ FILTER PC Board

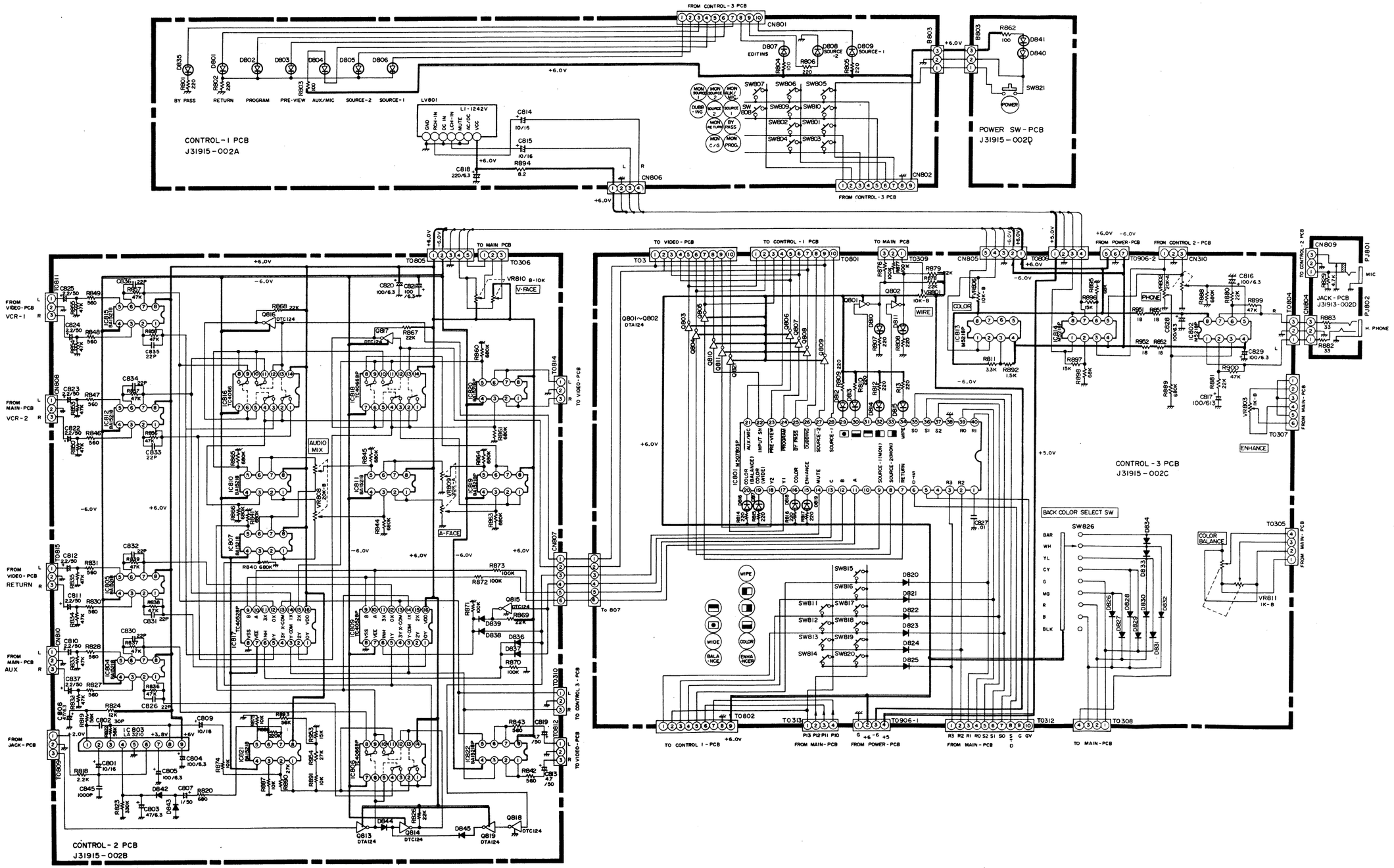


Schematic Diagram (Control Circuit)

● **Use of Schematic Diagram**

Notes:

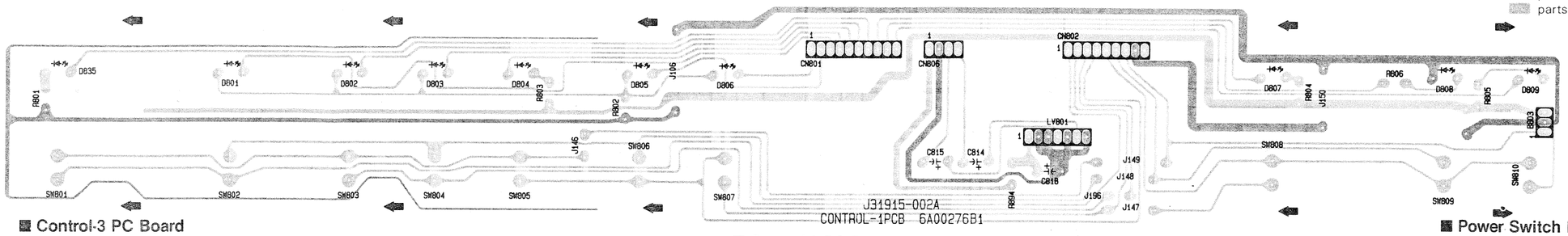
1. ——— shows the B (+) power supply.
2. ——— shwos the B (−) power supply.
3. Values printed in red show the voltae of each section of the circuits as measured by a tester (having an internal resistance of 20 kohms/V), with the power switch turned ON.
4. Parts marked with ⚠ (in the shaded areas [redacted]) are safety parts. When replacing these, be sure to use only the designated parts to ensure safety.
5. This is a standard circuit diagram.
   Design and contents are subject to change without notice.



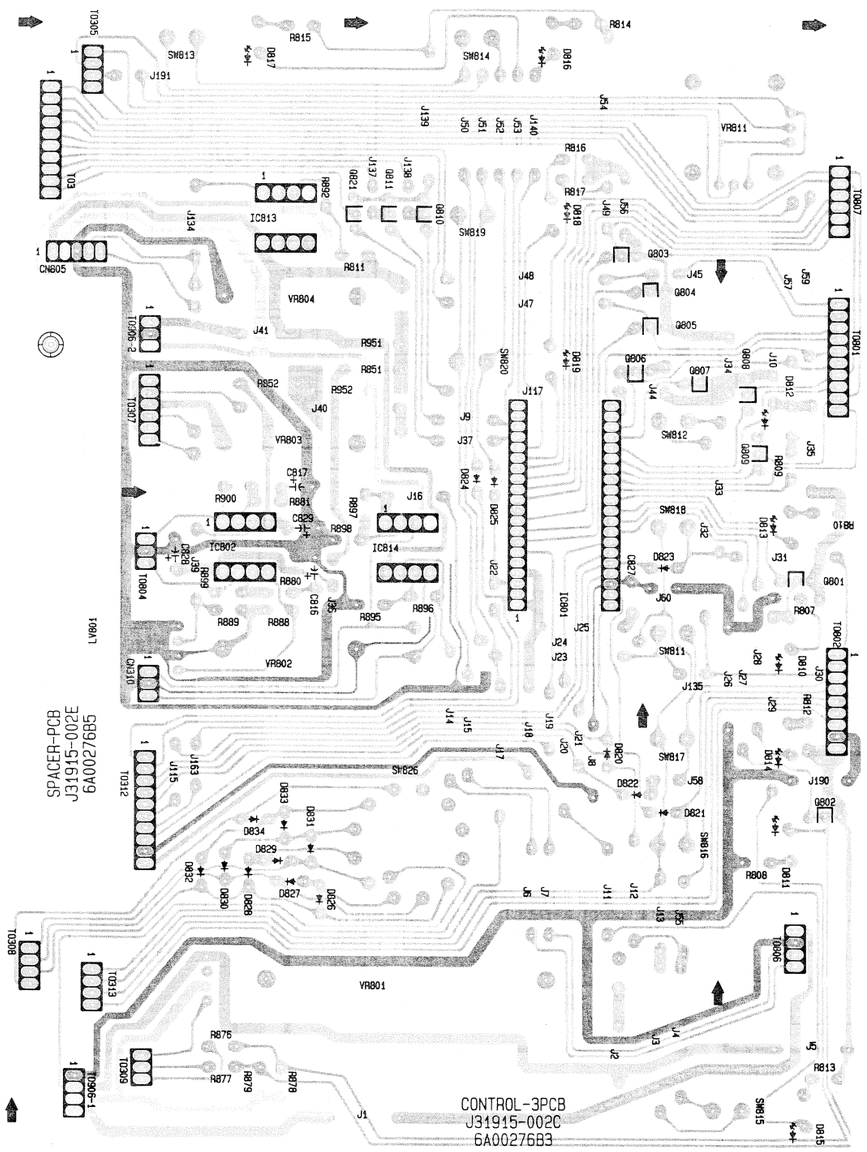
Printed Circuit Board (Full Scale)

part is (+) B power source.
part is (−) B power source.
part is earth.
parts are others.

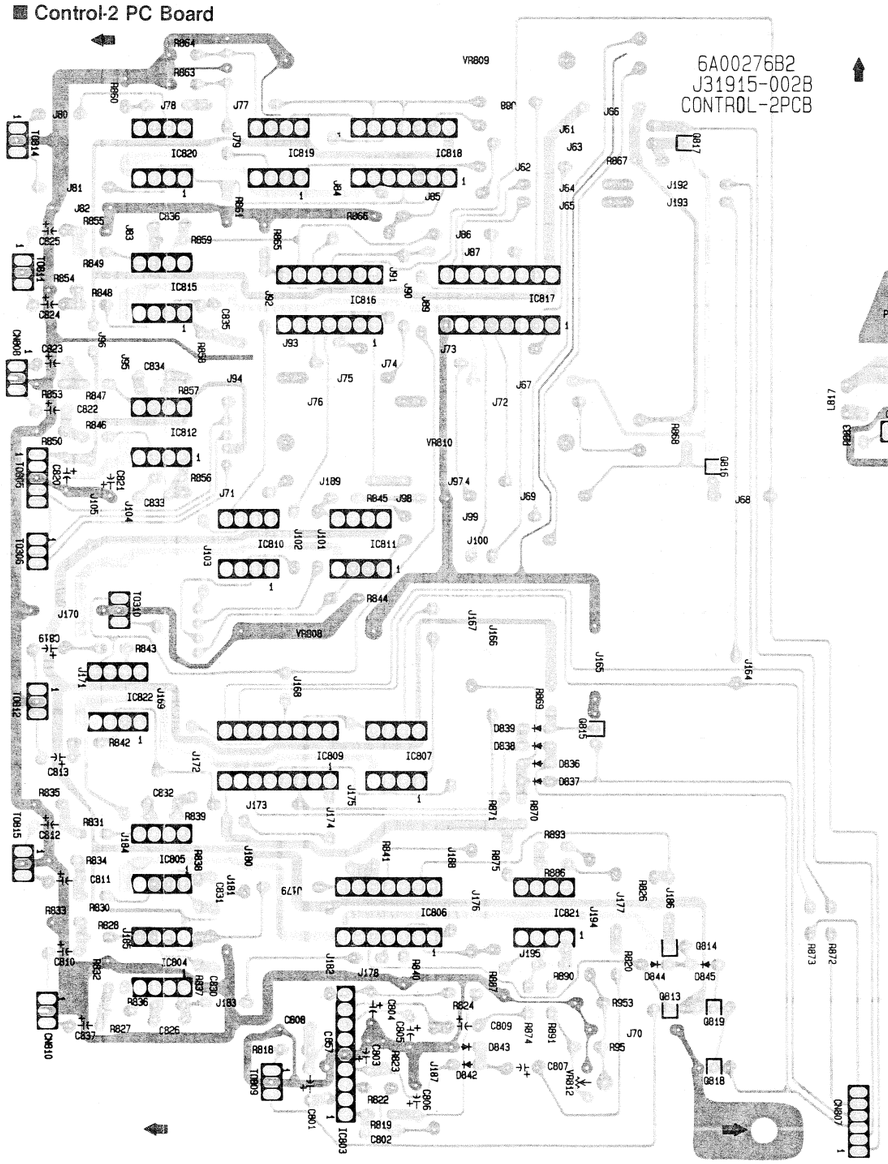
Control-1 PC Board



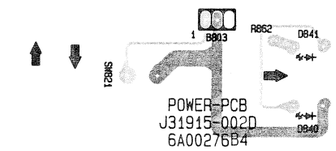
Control-3 PC Board



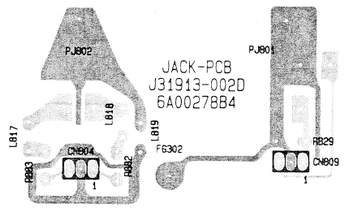
Control-2 PC Board



Power Switch PC Board



Jack PC Board

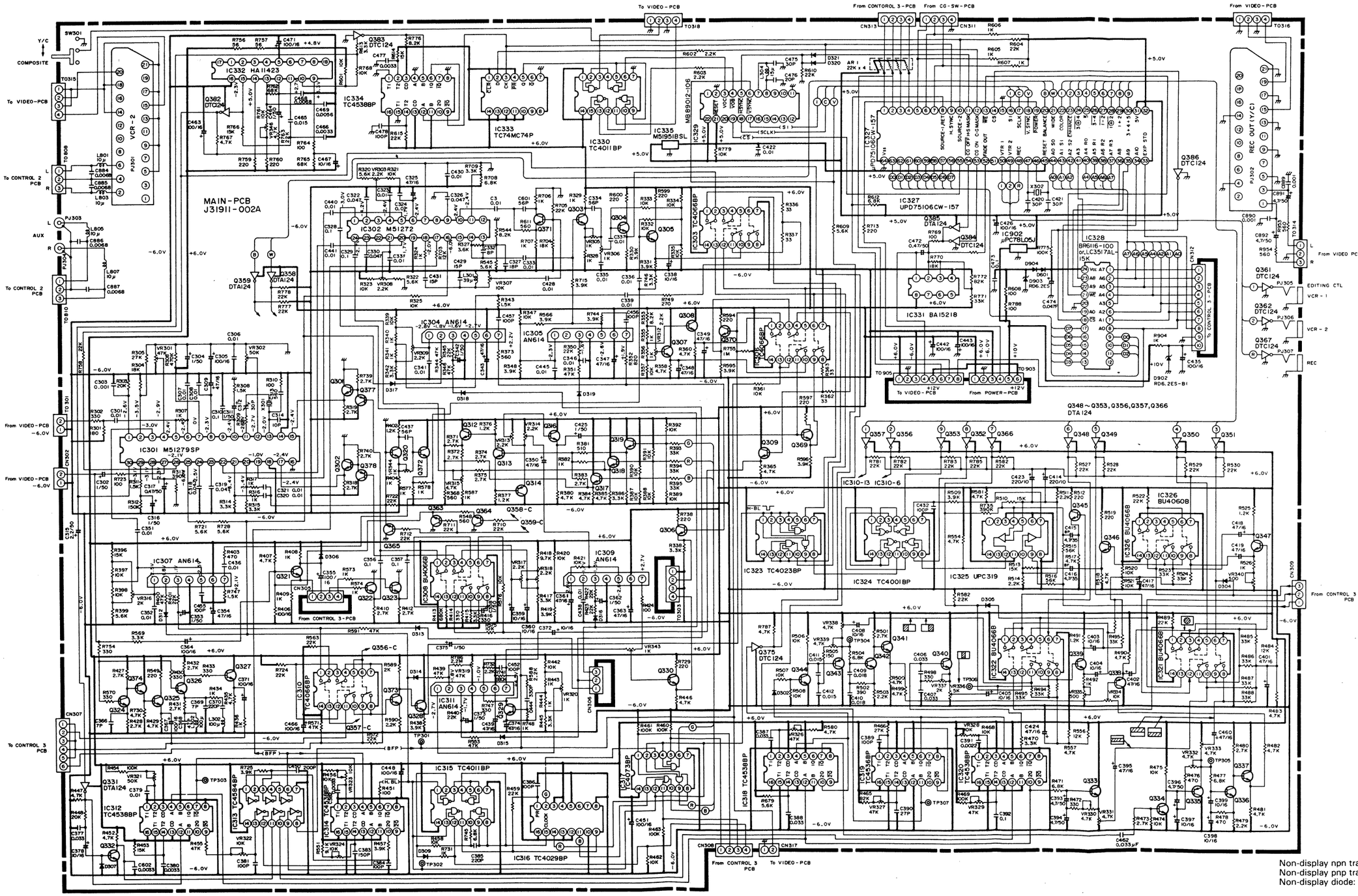


Schematic Diagram (Main Circuit)

● **Use of Schematic Diagram**

Notes:

1. ——— shows the B (+) power supply.
2. ——— shwos the B (−) power supply.
3. Values printed in red show the voltae of each section of the circuits as measured by a tester (having an internal resistance of 20 kohms/V), with the power switch turned ON.
4. Parts marked with ⚠ (in the shaded areas ▨) are safety parts. When replacing these, be sure to use only the designated parts to ensure safety.
5. This is a standard circuit diagram. Design and contents are subject to change without notice.



Non-display npn transistor 2SC2603
Non-display pnp transistor 2SA1115
Non-display diode: 1SS11

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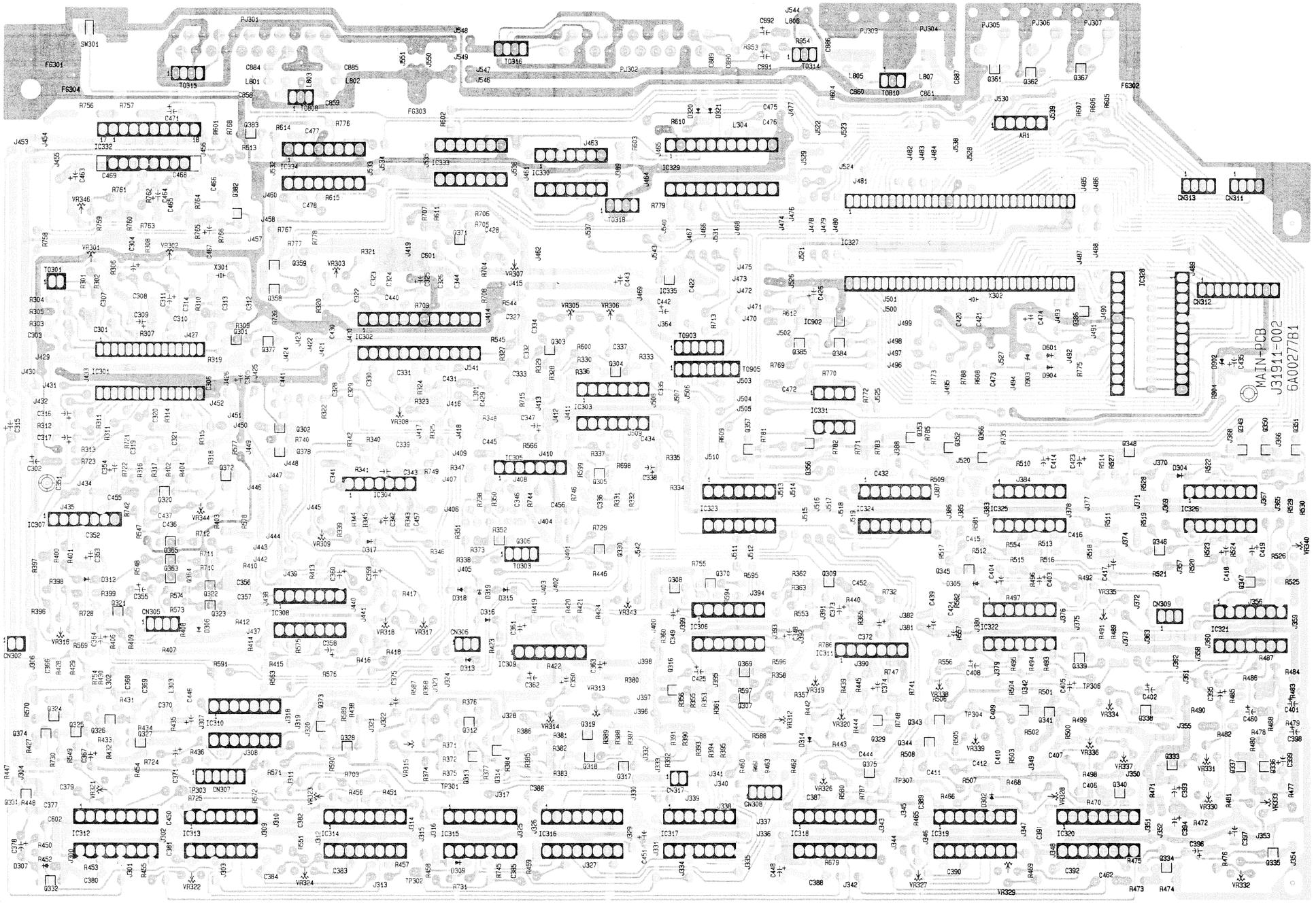
Printed Circuit Board (Full Scale)

part is (+) B power source.
part is (−) B power source.
part is earth.
parts are others.

■ Main PC Board

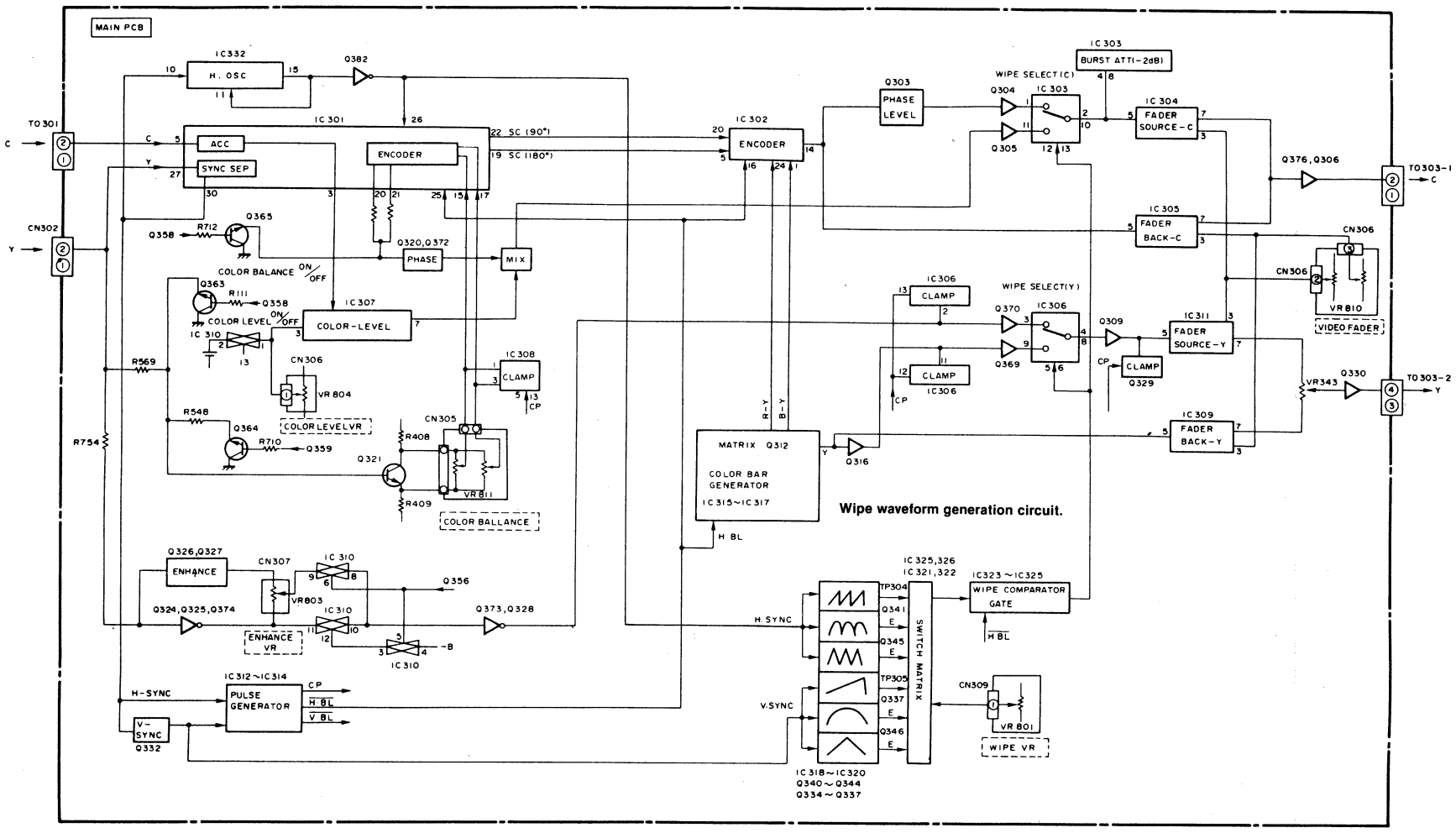


: 2SC2603
: 2SA1115

Block Diagram

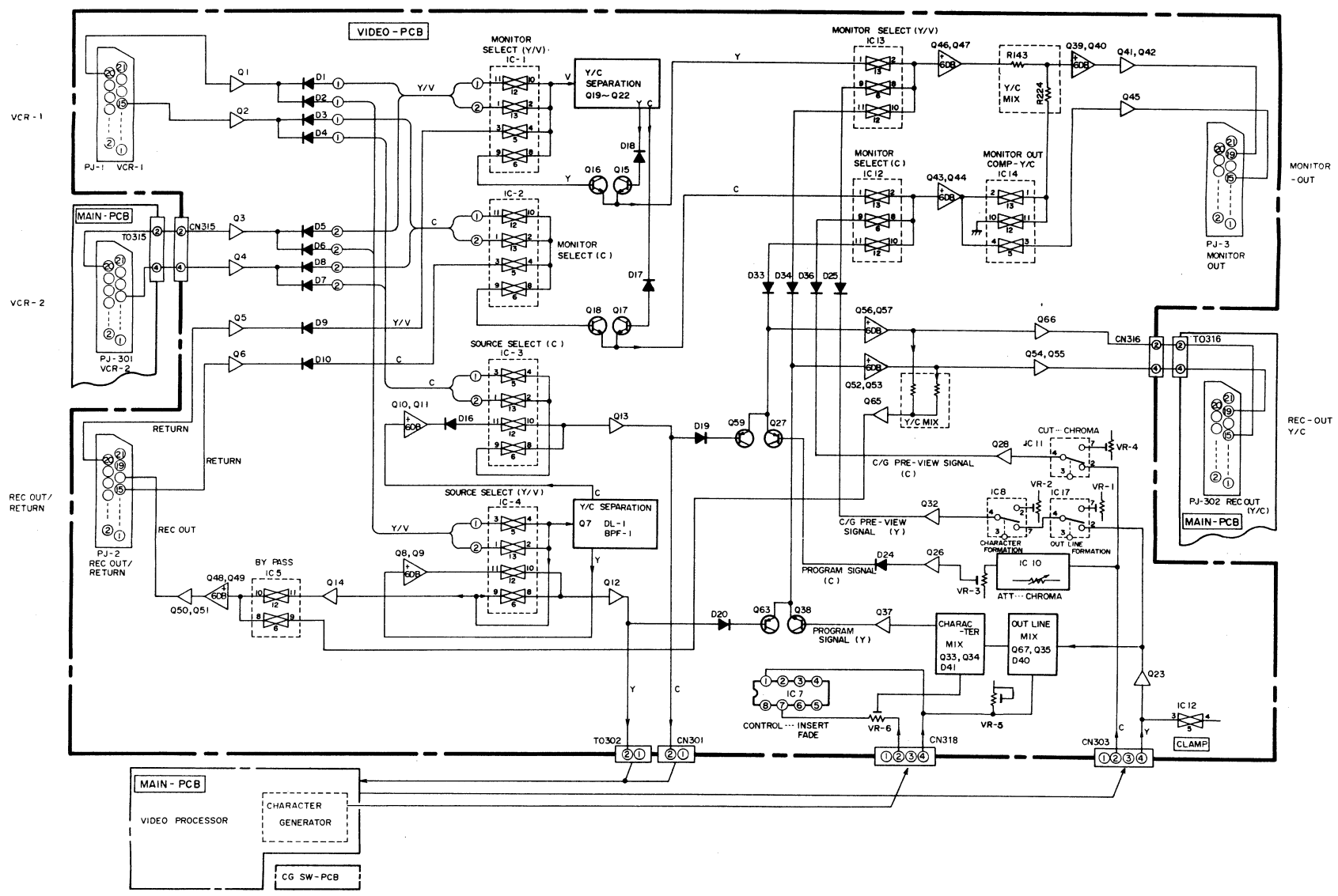
Note No. : IC pin No.
: Buffer amp
: Analog switch

■ Main PC Board Block Diagram



■ Video PC Board Block Diagram

Note No. : IC pin No.
: Buffer amp
: Analog switch

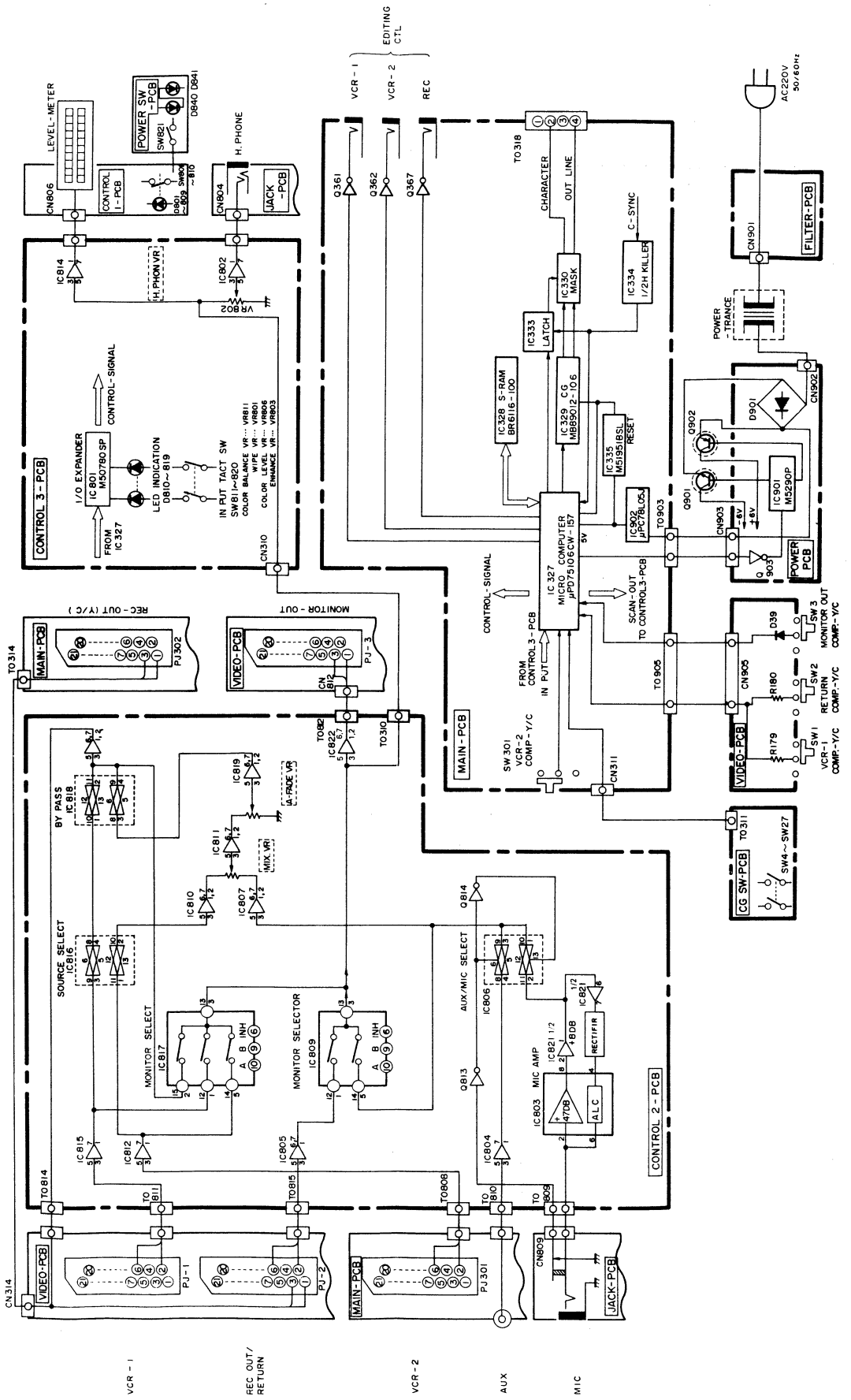


■ Control PC Board and Power Block Diagram

Note No. : IC pin No.
( ) or lower level display is on R channel
: Buffer amp
: Analog switch

Note No. : IC pin No.
( ) or lower level display is on R channel
: Buffer amp
: Analog switch

■ Control PC Board and Power Block Diagram



Logic Truth Tables

	CONTROL GATE / SIGNAL LINE		NAME	SOURCE-SELECT		BY-PASS		MONITOR-SELECT						AUX/MIC SELECT	
				1CH	2CH			A	B	1kH	A	B	1MH	AUX	MIC
AUDIO	IC NO. & PIN NO.	SOUND	L	IC816 6	← 12	IC818 12	← 6	IC817 10	← 9	← 6	IC809 10	← 9	← 6	IC806 6	← 12
			R	IC816 5	← 13	IC818 13	← 5	IC817 10	← 9	← 6	IC809 10	← 9	← 6	IC806 5	← 13
	SOURCE-SELECT		1 CH	H	L					-					
			2 CH	L	H										
	BY-PASS		ON			H	L								
			OFF			L	H								
	MONITOR-SELECT		1 CH				-	L	L	L			H		
			2 CH					H	L	L			H		
			AUX/MIC							H	H	L	L		
			PRE./PRO.					L	H	L			H		
			RETURN							H	L	L	L		
	AUX/MIC SELECT		AUX											H	L
			MIC											L	H

	CONTROL GATE / SIGNAL LINE		NAME	SOURCE-SELECT				BY-PASS		MONITOR-SELECT								COMMON GATE		
				1 CH	2 CH					1CH	2 CH	RET		PRE	PRO					
VIDEO	IN NO. & PIN NO.	SOUND	COMPOSITE /Y	IC4 5	← 13	← 12	← 6	IC5 12	← 6	IC1 12	← 13	← 5	← 6	IC13 6	← 12	← 13	IC14 13	← 12		
			C	IC3 5	← 13	← 12	← 6			IC2 12	← 13	← 5	← 6	IC12 6	12	13				IC14 5
	SOURCE-SELECT		1 CH	H		L*1	H*2	L	H											
			2 CH		H			L	H											
	BY-PASS		ON					L*3	H*4											
			OFF					L	H											
	MONITOR-SELECT		1 CH							H			*5			H				
			2 CH								H					H	*8	*9		
			RETURN									H				H				
			PRE VIEW											H			L*6	H*7		
			PROGRAM												H					

WIPE PATTERN / CONTROL GATE	IC322 12	← 13	← 5	← 6	IC321 12	← 6	← 5	IC326 6	← 12
	H	L	H	L					
	H	H	L	L					
	L	H	L	H					
					L	L	H	L	H
					L	H	L	H	L
					H	L	L	H	L
	L	H	L	L	L	L	H	H	L

*1, 2, 3, 4...Inverts when Channel Select input SW is positioned at Composite side.
*6, 7...Inverts when output switch is positioned at Composite side.

*8, 9

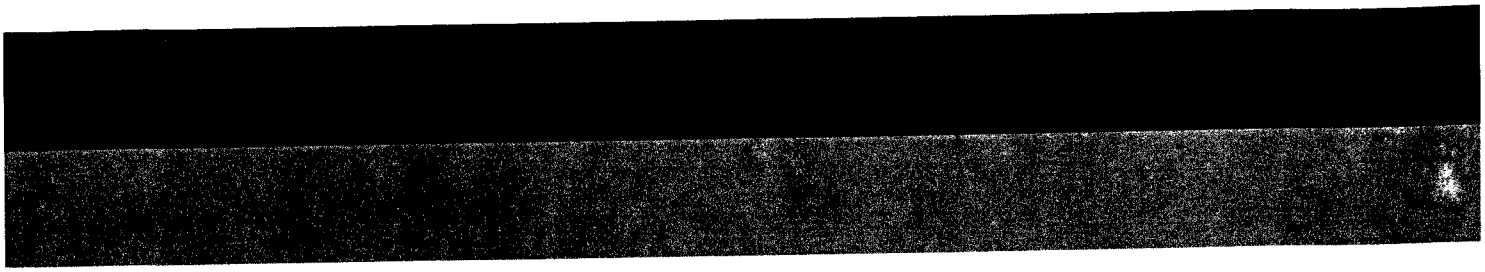
I SW	O SW	*8	*9
Y/C	Y/C	L	H
Y/C	COMPO	H	L
COMPO	Y/C	L	H
COMPO	COMPO	L	H

*5

I SW	O SW	*5
Y/C	Y/C	H
Y/C	COMPO	H
COMPO	Y/C	L
COMPO	COMPO	H

—MEMO—

JX-SV77



JVC

VICTOR COMPANY OF JAPAN, LIMITED
AUDIO ACCESSORY DIVISION, YAMATO PLANT, 1644, Shimotsuruma, Yamato-shi, Kanagawa-ken, 242, JAPAN.

(No. 7O080)

Printed in Japan
8909(V)

JVC

SERVICE MANUAL

PAL

JX-SV77 (E), (EB), (EK)

Additional Version

Since the basic specifications are same as those of the JX-SV77 (E), (EB), (EK), refer to the previously issued Service Manual No. 70086 together with this booklet.
Operations from the front panel are entirely the same as the JX-SV77 (E), (EB), (EK).

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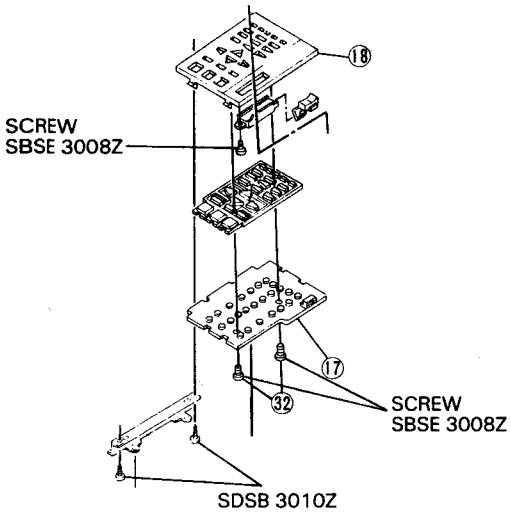
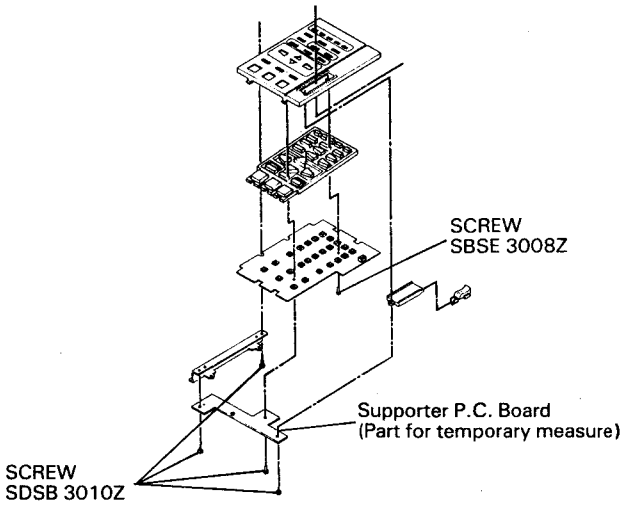
137
No. 70086B
Nov. 1989

1 A faulty operation when using the C/G button may cause the C/G button to catch on the C/G plate. For this reason, the method of attaching the CG SW PC board assembly to the top cover has been changed as follows.

1) Temporary measure (Serial No. 14401701-15402500)



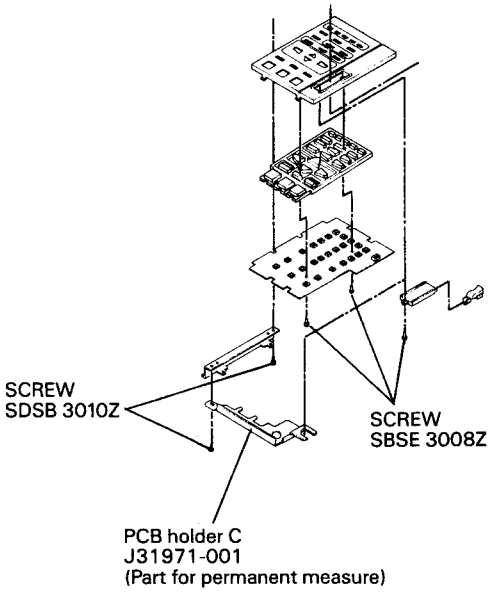
[Original]



[Temporary measure]

Note: Be careful of the length of the attachment screws.

2) Permanent measure (Serial No. 15402501 —)



Note: Be careful of the length of the attachment screws.

List of changed and additional parts

Part No.	Part Name	Q'ty	Remarks
J31971-001	PCB holder	1	

Use this permanent measure when servicing equipment.

2 (No. 70086B)

2 Changes in electrical circuits and parts.

1. The following parts and circuits will be changed starting with # 2001 as a means of dealing with character generator circuit temperature characteristics.

Prior to change		Following change
Q24, 25	2SC2603E, F	Omission
R84, 86	QRD141J-221	Omission
R83, 93	QRD141J-392	Omission
VR1 ~ 4	QVPD602-472 (4.7KΩ)	QVPA601-222M (2.2KΩ)
VR5 ~ 6	QVPD672-103 (10KΩ)	QVPA601-222M (2.2KΩ)
R123	QRD141J-472 (4.7k ¼W)	QRD141J-272 (2.7KΩ ¼W)
R233	QRD141J-272 (2.7KΩ ¼W)	QRD141J-332 (3.3KΩ ¼W)
R90, 96	QRD141J-682 (6.8KΩ ¼W)	QRD141J-103 (10KΩ ¼W)
R99	QRD141J-392 (3.9KΩ ¼W)	QRD141J-272 (2.7KΩ ¼W)
R91, 92	QRD141J-392 (3.9KΩ ¼W)	J44847-392 (3.9KΩ ¼W)
R244	addition	J44847-562 (5.6KΩ ¼W)
R243	addition	J44847-472 (4.7KΩ ¼W)
R241	addition	QRD141J-122 (1.2KΩ ¼W)
R242	addition	QRD141J-682 (6.8KΩ ¼W)

2. With the addition of EG specifications, the units will have common PC boards. Patterns and silk screen printing will be changed starting with EB # 2001. The parts numbers will be as follows.

Prior to change		Following change
Main P.C. Board	J31911-001	J31911-002
Main P.C. Board Ass'y	J31912-001	J31912-002
Video P.C. Board	J31913-001	J31913-002
Video P.C. Board Ass'y	J31914-001	J31914-002
Control P.C. Board	J31915-001	J31915-002
Control P.C. Board Ass'y	J31916-001	J31916-002

* Please refer to the block diagram, schematic diagram and printed circuit boards included.
All lists of electrical parts will be corrected due to the above changes and in order to correct erroneous entries.

12. Electric Parts List

⚠	Item No.	Symbol No.	Part No.	Part Name	Q'ty	Remarks
		<Main PC Board>				
		ICs				
		IC301	M51279SP	IC	1	Mitsubishi
		IC302	M51272P	IC	1	Mitsubishi
		IC304, 305, 307, 309, 311	AN614	IC	5	Matsushita
		IC303, 306, 308, 310, 321, 322, 326	TC4066BP	IC	8	Toshiba
		IC312, 314, 318~320, 334	TC4538BP	IC	6	Toshiba
		IC315, 330	TC4011BP	IC	2	Toshiba
		IC316	TC4029BP	IC	1	Toshiba
		IC317	TC4073BP	IC	1	Toshiba
		IC323	TC4023BP	IC	1	Toshiba
		IC324	TC4001BP	IC	1	Toshiba
		IC325	μPC319C	IC	1	NEC
		IC327	μPD75106CW-157	IC	1	NEC
		IC313	TC4584BP	IC	1	Toshiba
		IC328	BR6116-100	IC	1	Rohm (or LC3517AL-15K)
		IC329	MB89012-106	IC	1	Fujitsu
		IC331	BA15218	IC	1	Rohm
		IC332	HA11423	IC	1	Hitachi
		IC333	TC74HC74P	IC	1	Toshiba
		IC335	M51951BSL	IC	1	Mitsubishi
		IC902	μPC78L05J	IC	1	NEC
		Transistors				
		Q301~309, 312, 313, 316~330, 332~334, 336, 337, 339~342, 344~347, 363~365, 369~374	2SC2603E, F	Transistor	48	Mitsubishi
		Q314, 335, 338, 343, 377, 378	2SA1115E, F	Transistor	7	Mitsubishi
		Q331, 348~353, 356~359, 366, 385	DTA124ES	Digital Transistor	13	Rohm
		Q361, 362, 367, 375, 382~384, 386	DTC124ES	Digital Transistor	8	Rohm
		Diodes				
		D902, 903	RD6•2ES-B1	Zener Diode	2	NEC
		D302, 304~307, 309, 312~321, 601, 904	1SS119	Diode	18	Hitachi
		Capacitors				
		C474	EEZ0503-479	Electrolytic Capacitor	1	0.047F/5.5V
		C414, 423	QETB1AM-227	Electrolytic Capacitor	2	220μF/10V
		C338, 359, 360, 372, 378, 397~399, 403~405, 408, 467	QER51CM-106	Electrolytic Capacitor	13	10μF/16V
		C309, 325, 343, 347~350, 354, 363, 374, 395, 401, 402, 417~419, 424, 439, 497, 460	QETB1CM-476	Electrolytic Capacitor	19	47μF/16V
		C305, 355, 361, 364, 367, 371, 426, 435, 442, 443, 446, 448, 451, 463, 471	QETB1CM-107	Electrolytic Capacitor	15	100μF/16V
		C415, 416	QEN51VM-475	Electrolytic Capacitor	2	4.7μF/35V (non-polarity) (Available 50V)
		C317, 472	QEN51HM-474	Electrolytic Capacitor	1	0.47μF/50V
		C302, 304, 311, 316, 342, 353, 358, 362, 373, 375, 425, 464	QET51HM-105	Electrolytic Capacity	12	1μF/50V
		C315, 422	QETB1HM-225	Electrolytic Capacitor	6	2.2μF/50V
		C393, 394, 396, 891, 892	QETB1HM-475	Electrolytic Capacitor	3	4.7μF/50V
		C303, 889, 890	QCY21HK-102	Ceramic Capacitor	1	0.001μF/50V
		C301, 306~308, 320, 321, 323, 324, 331, 333, 335~337, 339, 341, 344, 346, 351, 352, 422, 428, 430, 436, 438, 440, 441, 445	QCY21HK-103	Ceramic Capacitor	31	0.01μF/50V
		C432, 452, 455~457	QCY21HK-101	Ceramic Capacitor	2	100pF/50V
		C444	QCY21HJ-331	Ceramic Capacitor	1	330pF/50V
		C313	QCY21HK-561	Ceramic Capacitor	1	560pF/50V
		C366, 369	QCS21HJ-7R0	Ceramic Capacitor	2	7pF/50V (SL)
		C332	QCS21HJ-8R0	Ceramic Capacitor	1	8pF/50V (SL)
		C314	QCS21HJ-100	Ceramic Capacitor	1	10pF/50V (SL)
		C429, 431	QCS21HJ-150	Ceramic Capacitor	2	15pF/50V (SL)
		C327	QCS21HJ-180	Ceramic Capacitor	1	18pF/50V (SL)
		C420, 476	QCS21HJ-200	Ceramic Capacitor	2	20pF/50V (SL)
		C421, 475	QCS31HJ-300Z	Ceramic Capacitor	2	30pF/50V (SL)
		C368	QCS21HJ-470	Ceramic Capacitor	1	47pF/50V (SL)

⚠	Item No.	Symbol No.	Part No.	Part Name	Q'ty	Remarks
		C334, 437, 601	QCS21HJ-560	Ceramic Capacitor	3	56pF/50V (SL)
		C370	QCS21HJ-221	Ceramic Capacitor	1	220pF/50V (SL)
		C390	QCT26CH-270	Ceramic Capacitor	1	27pF/50V (CH)
		C381, 384, 386, 389, 478	QCT26CH-101	Ceramic Capacitor	3	100pF/50V (CH)
		C383	QCT26CH-151	Ceramic Capacitor	1	150pF/50V (CH)
		C450	QCS21HJ-201	Ceramic Capacitor	1	200pF/50V (SL)
		C385	QCT26CH-221	Ceramic Capacitor	1	220pF/50V (CH)
		C884~887	QCY21HK-682	Ceramic Capacitor	4	0.0068μF/50V
		C377, 387, 388, 406, 407, 462	QFV81HJ-333	Mylar Capacitor	7	0.033μF/50V
		C318, 319, 322, 326, 330	QFV81HJ-473	Mylar Capacitor	5	0.047μF/50V
		C328, 329, 356, 357, 473	QFV81CJ-104	Mylar Capacitor	5	0.1μF/16V
		C310, 392	QFV81HJ-104	Mylar Capacitor	2	0.1μF/50V
		C391	QFN31HJ-222	Mylar Capacitor	1	0.0022μF/50V
		C380, 382, 466, 477, 602	QFN31HJ-332	Mylar Capacitor	4	0.0033μF/50V
		C469	QFN31HJ-562Z	Mylar Capacitor	1	0.0056μF/50V
		C468	QFN31HJ-682Z	Mylar Capacitor	1	0.0068μF/50V
		C379	QFN31HJ-103	Mylar Capacitor	1	0.01μF/50V
		C411, 412, 465	QFN31HJ-153	Mylar Capacitor	2	0.015μF/50V
		C409, 410	QFN31HJ-183	Mylar Capacitor	2	0.018μF/50V
		C312	J44141-300	Trim Capacitor	1	30pF
		Resistors				
		R310, 424, 451, 608, 723, 764, 769, 788	QRD141J-101	Carbon Resistor	8	100Ω ¼W
		R505	QRD141J-151	Carbon Resistor	1	150Ω ¼W
		R301	QRD141J-181	Carbon Resistor	1	180Ω ¼W
		R307, 316, 317, 324, 328, 329, 340, 341, 355, 356, 382, 404, 408, 409, 434, 436, 443, 444, 492, 526, 573, 574, 577, 578, 587, 605, 606, 607, 611, 706, 707, 731, 748, 904	QRD141J-102	Carbon Resistor	34	1KΩ ¼W
		R376, 377, 491, 525	QRD141J-122	Carbon Resistor	5	1.2KΩ ¼W
		R308, 311, 343, 402, 742,	QRD141J-152	Carbon Resistor	5	1.5KΩ ¼W
		R321, 323, 325, 332~335, 339, 347, 357, 361, 387~392, 397, 398, 420, 421, 442, 456, 458, 462, 468, 474, 475, 506~508, 520, 521, 547, 575, 576, 601, 761, 768, 779	QRD141J-103	Carbon Resistor	40	10KΩ ¼W
		R484, 556, 579	QRD141J-123	Carbon Resistor	3	12KΩ ¼W
		R396, 453, 510, 513, 614, 766	QRD141J-153	Carbon Resistor	6	15KΩ ¼W
		R304, 704, 770	QRD141J-183	Carbon Resistor	3	18KΩ ¼W
		R454, 460, 461, 463, 469, 775	QRD141J-104	Carbon Resistor	6	100KΩ ¼W
		R312	QRD141J-154	Carbon Resistor	1	150KΩ ¼W
		R755, 773	QRD141J-105	Carbon Resistor	2	1MΩ ¼W
		R512, 519, 549, 594, 597, 599, 600, 713, 729, 738, 749, 759, 760	QRD141J-221	Carbon Resistor	13	220Ω ¼W
		R589	QRD141J-202	Carbon Resistor	1	2KΩ ¼W
		R479, 503, 511, 514, 588, 590, 732, 602, 603,	QRD141J-222	Carbon Resistor	9	2.2KΩ ¼W
		R318, 319, 371, 372, 374, 375, 383, 410, 412, 427, 428, 431, 432, 473, 480, 501, 739, 740	QRD141J-272	Carbon Resistor	18	2.7KΩ ¼W
		R303, 448	QRD141J-203	Carbon Resistor	2	20KΩ ¼W
		R345, 350, 401, 422, 440, 459, 489, 522, 527~530, 563, 572, 582, 604, 610, 615, 705, 710~712, 722, 724, 758, 763, 777, 778, 781~783, 785	QRD141J-223	Carbon Resistor	32	22KΩ ¼W
		R305, 466	QRD141J-223	Carbon Resistor	2	27KΩ ¼W
		R786	QRD141J-225	Carbon Resistor	1	2.2MΩ ¼W
		R336, 337, 362, 363, 747	QRD141J-330	Carbon Resistor	4	33Ω ¼W
		R302, 414, 416, 430, 433, 472, 498, 570, 747, 754	QRD141J-331	Carbon Resistor	10	330Ω ¼W
		R502	QRD141J-391	Carbon Resistor	1	390Ω ¼W
		R314, 315, 338, 342, 406, 415, 417, 445, 470, 569, 613, 709, 746, 386	QRD141J-332	Carbon Resistor	14	3.3KΩ ¼W
		R327	QRD141J-362	Carbon Resistor	1	3.6KΩ ¼W
		R330, 331, 348, 419, 438, 457, 509, 566, 595, 596, 715, 725, 744	QRD141J-392	Carbon Resistor	13	3.9KΩ ¼W

⚠	Item No.	Symbol No.	Part No.	Part Name	Q'ty	Remarks
		R393~395, 485~488, 493~497, 523, 524, 771	QRD141J-333	Carbon Resistor	15	33KΩ ¼W
		R313, 735	QRD141J-394	Carbon Resistor	2	390KΩ ¼W
		R403, 476, 478	QRD141J-471	Carbon Resistor	5	470Ω ¼W
		R358, 360, 365, 380, 384, 385, 407, 429, 435, 446, 447, 452, 481~483, 490, 499, 500, 517, 518, 554, 557, 580, 581, 730, 767, 787	QRD141J-472	Carbon Resistor	27	4.7KΩ ¼W
		R344, 346, 351, 400, 423, 439, 455, 553, 571, 591	QRD141J-473	Carbon Resistor	10	47KΩ ¼W
		R306	QRD141J-474	Carbon Resistor	1	470KΩ ¼W
		R756, 757	QRD141J-560S	Carbon Resistor	2	56Ω ¼W
		R381	QRD141J-511	Carbon Resistor	1	510Ω ¼W
		R368, 373, 548, 953, 954	QRD141J-561	Carbon Resistor	5	560Ω ¼W
		R320, 322, 399, 545, 609, 679, 721, 728	QRD141J-562	Carbon Resistor	8	5.6KΩ ¼W
		R515, 516	QRD141J-563	Carbon Resistor	2	56KΩ ¼W
		R309	QRD141J-680	Carbon Resistor	1	68Ω ¼W
		R471, 477, 504, 612, 708	QRD141J-682	Carbon Resistor	5	6.8KΩ ¼W
		R762, 765	QRD141J-683	Carbon Resistor	2	68KΩ ¼W
		R413, 749	QRD141J-684	Carbon Resistor	2	680KΩ ¼W
		R352	QRD141J-821	Carbon Resistor	1	820Ω ¼W
		R353, 544, 776	QRD141J-822	Carbon Resistor	3	8.2KΩ ¼W
		R465, 772	QRD141J-823	Carbon Resistor	2	82KΩ ¼W
		R418, 551	QRD141J-912	Carbon Resistor	2	9.1KΩ ¼W
		R745	J44698-001	Carbon Resistor	1	6.8KΩ ¼W
		VR335, 340	QVPD602-501	Semi-fixed Resistor	2	500B
		VR305, 306, 320, 343, 344	QVPD602-102	Semi-fixed Resistor	5	1KB
		VR303, 308, 309, 312~314, 316~318, 337	QVPD602-202	Semi-fixed Resistor	10	2KB
		VR315, 330~333, 336, 338, 339, 346	QVPD602-502	Semi-fixed Resistor	9	5KB
		VR322, 324, 328, 334	QVPD602-103	Semi-fixed Resistor	4	10KB
		VR323	QVZ3513-103	Semi-fixed Resistor	1	10KB
		VR301, 302, 321, 326, 327, 329	QVPD602-503	Semi-fixed Resistor	6	50KB
		AR1	QRB045J-223	Resistance Arrey	1	22KΩ×4
		L301	J42574-390	Inductor	1	39μH
		L302, 303	J42574-101	Inductor	2	100μH
		L304	J42574-150	Inductor	1	15μH
		X301	J44699-001	CERA-LOCK	1	3.58MHz
		X302	J44700-001	CRYSTAL	1	17.734475MHz
		L801~808	EQL4004-100	Inductor	8	10μH
		SW301	J44750-001	Slide Switch	1	
		PJ301, 2	J44343-001	21 Pin Jack	2	
		PJ303	J44424-001	Pin Jack	1	1P (White)
		PJ304	J44423-001	Pin Jack	1	1P (Red)
		PJ305~307	J44421-001	Mini Jack	3	
		Connectors				
		CN302, 317	J44436-001	Connector	2	2P
		CN307	J43143-001	Connector	1	6P
		CN309	J44704-001	Connector	1	3P (Blue)
		CN306	J44704-002	Connector	1	3P (White)
		CN305	J44705-001	Connector	1	4P (Blue)
		CN308	J44705-002	Connector	1	4P (Red)
		CN311	J44705-003	Connector	1	4P (Black)
		CN313	J44705-004	Connector	1	4P (Yellow)
		CN312	J44706-001	Connector	1	10P (Blue)
			J31911-002	Main PC Board		
	1		J31912-002	Main PC Board Ass'y	1	(Not supplied as an Ass'y P.C. Board)
		<VIDEO PC Board>				
		ICs				
		IC1~5, 12~14	TC4066BP	IC	8	Toshiba
		IC6	TC4069μBP	IC	1	Toshiba
		IC7	BA15218	IC	1	Rohm
		IC8, 11, 17	LA7016	IC	3	Sanyo
		IC10	AN614	IC	1	Matsushita
		IC16	TC4001BP	IC	1	Toshiba
⚠		IC901	M5290P	IC	1	Mitsubishi
		IC903	μPC78L05J	IC	1	NEC

⚠	Item No.	Symbol No.	Part No.	Part Name	Q'ty	Remarks
		Diodes				
		D11~15, 37	RD8.2ES-B3	Zener Diode	6	
		D42~45	RD4.7ES-B2	Zener Diode	4	
		D907	RD12ES-B3	Zener Diode	1	
		D1~10, 16~36, 39~41, 46, 47, 905, 906, 908	ISS119	Diode	39	Hitachi
⚠		D901	2B4B41	Bridge Diode	1	Toshiba
		Transistors				
		Q1~6, 9, 11, 21, 22, 27, 28, 32, 35, 38, 40, 41, 44, 46, 49, 51, 53, 55, 57, 59, 63, 67	2SA1115F, F	Transistor	25	Mitsubishi
		Q7, 8, 10, 12~20, 23, 26, 33, 34, 37, 39, 42, 43, 45, 47, 48, 50, 52, 54, 56, 64~66, 903	2SC2603F, F	Transistor	31	Mitsubishi
		Q58, 60~62, 905	DTC124ES	Digital Transistor	5	Rohm
		Q904	DTA124ES	Digital Transistor	1	Rohm
⚠		Q901	2SD1406	Transistor	1	
⚠		Q902	2SB1015	Transistor	1	
		Capacitors				
		C1, 3, 5	QEK50JM-476	Electrolytic Capacitor	3	47μF/6.3V
		C906, 907	QETB1AM-477	Electrolytic Capacitor	2	470μF/10V
		C22, 909	QETB1CM-106	Electrolytic Capacitor	2	10μF/16V
		C21, 24	QETB1CM-476	Electrolytic Capacitor	2	47μF/16V
		C7, 17, 18, 27, 28, 34, 36~41, 48, 49, 910, 912	QETB1CM-107	Electrolytic Capacitor	14	100μF/16V
		C905	QETB1CM-228	Electrolytic Capacitor	1	2200μF/16V
		C904	QETB1CM-338	Electrolytic Capacitor	1	3300μF/16V
		C42, 43	QET51HM-105	Electrolytic Capacitor	2	1μF/50V
		C844, 845	QETB1HM-475	Electrolytic Capacitor	2	4.7μF/50V
		C842, 843, 846, 847	QCY21HK-102	Ceramic Capacitor	4	0.001μF/50V
		C838~841	QCY21HK-682	Ceramic Capacitor	4	0.0068μF/50V
		C2, 4, 6, 10, 13~16, 20, 23, 25, 26, 29, 33, 35, 44~46,	QCY21HK-103	Ceramic Capacitor	21	0.01μF/50V
⚠		901~903				
		C19, 30, 47	QCS21HJ-100	Ceramic Capacitor	5	10pF/50V (SL)
		C9	QCS21HJ-150	Ceramic Capacitor	1	15pF/50V (SL)
		C8	J44141-300	Trim Capacitor	1	30pF
		Resistors				
		R124, 149, 158, 194, 201, 208	QRD141J-101	Carbon Resistor	7	100Ω ¼W
		R57, 64, 195, 202, 209	QRD141J-181	Carbon Resistor	5	180Ω ¼W
		R32, 33, 39, 42, 112, 143, 173, 183, 224	QRD141J-102	Carbon Resistor	8	1KΩ ¼W
		R40, 241	QRD141J-122	Carbon Resistor	2	1.2KΩ ¼W
		R31	QRD141J-152	Carbon Resistor	1	1.5KΩ ¼W
		R42, 68, 71, 75, 88, 90, 96, 106, 109, 110, 113, 179, 197, 903	QRD141J-103	Carbon Resistor	12	10KΩ ¼W
		R140, 155, 165, 170	QRD141J-113	Carbon Resistor	4	11KΩ ¼W
		R65	QRD141J-183	Carbon Resistor	1	18KΩ ¼W
		R74, 77~81, 223, 237	QRD141J-104	Carbon Resistor	7	100KΩ ¼W
		R19~23, 38, 49, 61, 69, 70, 72, 76, 85, 89, 94, 97, 98, 100, 104, 107, 114, 122, 136, 174, 182, 187, 189, 191, 192, 216, 220, 240	QRD141J-221	Carbon Resistor	30	220Ω ¼W
		R196, 203, 210	QRD141J-241SZ	Carbon Resistor	3	240Ω ¼W
		R58, 63	QRD141J-222	Carbon Resistor	2	2.2KΩ ¼W
		R25~30, 50, 67, 73, 95, 99, 121, 123, 126, 151, 160, 176~178, 200, 207, 214, 215, 217, 239	QRD141J-272	Carbon Resistor	22	2.7KΩ ¼W
		R13~18, 219	QRD141J-203	Carbon Resistor	7	20KΩ ¼W
		R882, 883	QRD141J-330	Carbon Resistor	2	33Ω ¼W
		R7~12, 41, 156, 164, 171, 172, 184, 218, 222, 235, 905, 906	QRD141J-223	Carbon Resistor	17	22KΩ ¼W
		R204, 211, 234	QRD141J-361SY	Carbon Resistor	3	360Ω ¼W
		R59	QRD141J-391	Carbon Resistor	1	390Ω ¼W
		R60, 62, 102, 105, 111, 115, 175, 229, 230	QRD141J-392	Carbon Resistor	8	3.9KΩ ¼W
		R66, 82, 188, 227, 228, 829, 901, 902, 909	QRD141J-472	Carbon Resistor	6	4.7KΩ ¼W
		R43, 135, 139, 198, 205, 212, 221, 884, 885, 907	QRD141J-561	Carbon Resistor	10	560Ω ¼W

⚠	Item No.	Symbol No.	Part No.	Part Name	Q'ty	Remarks
		R233	QRD141J-332	Carbon Resistor	1	3.3KΩ ¼W
		R91, 92	J44847-392	Metal Resistor	2	3.9KΩ ¼W (For dealing with temperature)
		R243	J44847-472	Metal Resistor	1	4.7KΩ ¼W (For dealing with temperature)
		R244	J44847-562	Metal Resistor	1	5.6KΩ ¼W (For dealing with temperature)
		R46~48, 51~56, 116~119, 185, 186, 238, 908	QRD141J-562	Carbon Resistor	13	5.6KΩ ¼W
		R225, 226	QRD141J-563	Carbon Resistor	2	56KΩ ¼W
		R125, 133, 134, 148, 150, 157, 159, 166	QRD141J-680	Carbon Resistor	8	68Ω ¼W
		R34, 129, 146, 154, 163, 169	QRD141J-621	Carbon Resistor	6	620Ω ¼W
		R35, 37, 44, 45, 127, 128, 137, 138, 144, 145, 152, 153, 161, 162, 167, 168	QRD141J-681	Carbon Resistor	15	680Ω ¼W
		R180	QRD141J-622SZ	Carbon Resistor	1	6.2KΩ ¼W
		R242	QRD141J-682	Carbon Resistor	1	6.8KΩ ¼W
		R1~6	QRD141J-750	Carbon Resistor	6	75Ω ¼W
		R128	QRD141-821	Carbon Resistor		820Ω ¼W
		R199, 206, 213	QRD141J-911SZ	Carbon Resistor	3	910Ω ¼W
		R232	QRD141-912	Carbon Resistor		9.1KΩ ¼W
		VR1~6	QVPA 601-222M	Semi-fixed Resistor	6	2.2KΩ
	3	PJ801	J44752-001	Mic Jack	1	
	4	PJ802	J44419-001	Headphone Jack	1	
		PJ1~3	J44343-001	21 pin Connector	3	
		SW1~3	J44750-001	Slide Switch	3	
		SW4~27	J43126-001	Tact Switch	24	
		L1, 2	J42574-101	Inductor	2	100μH
		L809~816	EQL4004-100	Inductor	8	10μH
		DL-1	J44751-001	Delay Line	1	
		BPF-1	J43411-001	B.P.F	1	
		Connectors				
		CN301, 317	J44436-001	Connectors	2	2P
		CN314, 804, 809, 811, 812, 814, 815	J43612-001	Connectors	7	3P
		CN303, 315, 316, 318	J43681-001	Connectors	4	4P
		CN903	J43143-001	Connectors	1	6P
		CN906	J43144-001	Connectors	1	7P
		CN905	J43683-001	Connectors	1	8P
		CN3	J44706-002	Connectors	1	10P (Red)
⚠		CN901, 902	J43613-001	Connectors	2	3P (For the use of Power Supply)
			J31913-002	Video P.C. Board		
	2		J31914-002	Video P.C. Board Ass'y	1	(Not supplied as an Ass'y P.C. Board)
		<Control PC Board>				
		ICs				
		IC801	M50780SP	IC	1	Mitsubishi
		IC802, 804, 805, 807, 810~815, 819~822	BA15218	IC	14	Rohm
		IC806, 816, 818	TC4066BP	IC	3	Toshiba
		IC809, 817	TC4052BP	IC	2	Toshiba
		IC803	LA3210	IC	1	Sanyo
		Transistors				
		Q814~818	DTC124ES	Digital Transistor	5	Rohm
		Q801~813, 819, 821	DTA124ES	Digital Transistor	15	Rohm
		Diodes				
		D820~834, 836~839, 842~845	ISS119	Diode	23	Hitachi
		D801~803, 805, 806, 808~814	SLR34MG70F165	LED	12	Green Rohm
		D804, 807, 815~819	SLR34YY70F165	LED	7	Yellow Rohm
		D840, 841	SLR34VR70F130	LED	2	Red Rohm
		D835	SLR34VR70F165	LED	1	Red Rohm
		LV801	PU60930	LED Level Meter	1	Rohm
		Capacitors				
		C801, 809, 814, 815	QETBOJM-106	Electolytic Capacitor	4	10μF/6.3V
		C804, 805, 816, 817, 820, 821, 828, 829	QETBOJM-107	Electolytic Capacitor	8	100μF/6.3V
		C818	QETBOJM-227	Electolytic Capacitor	1	220μF/6.3V
		C803, 806	QETBIAM-476	Electolytic Capacitor	2	47μF/6.3V
		C810~812, 822~825, 837	QETBIJM-225	Electolytic Capacitor	8	2.2μF/50V
		C807, 813, 819	QETBIHM-475N	Electolytic Capacitor	3	4.7μF/50V
		C827	QCY21HK-103	Ceramic Capacitor	1	0.01μF/50V

⚠	Item No.	Symbol No.	Part No.	Part Name	Q'ty	Remarks
		C808	QCY21HK-102	Ceramic Capacitor	1	0.001μF/50V
		C826, 830~836	QCS21HJ-220	Ceramic Capacitor	8	22pF/50V (SL)
		C802	QCS31HJ-300Z	Ceramic Capacitor	1	30pF/50V (SL)
		Resistors				
		R803, 862	QRD141J-101	Carbon Resistor	2	100Ω ¼W
		R892	QRD141J-152	Carbon Resistor	1	1.5KΩ ¼W
		R874, 875, 887, 891	QRD141J-103	Carbon Resistor	4	10KΩ ¼W
		R824	QRD141J-123	Carbon Resistor	1	12KΩ ¼W
		R896, 897, 953	QRD141J-153	Carbon Resistor	3	15KΩ ¼W
		R870~873, 876, 877	QRD141J-104	Carbon Resistor	6	100KΩ ¼W
		R801, 802, 805~810, 812~817	QRD141J-221	Carbon Resistor	14	220Ω ¼W
		R818	QRD141J-222	Carbon Resistor	1	2.2KΩ ¼W
		R826, 867~869, 878~881	QRD141J-223	Carbon Resistor	8	22KΩ ¼W
		R890, 954	QRD141J-273	Carbon Resistor	2	27KΩ ¼W
		R886	QRD141J-274S	Carbon Resistor	1	220KΩ ¼W
		R851, 852, 951, 952	QRD141J-180S	Carbon Resistor	4	18Ω ¼W
		R811	QRD141J-332	Carbon Resistor	1	3.3KΩ ¼W
		R823	QRD141J-334	Carbon Resistor	1	330KΩ ¼W
		R832~839, 850, 853~859, 899, 900	QRD141J-473	Carbon Resistor	18	47KΩ ¼W
		R827, 828, 830, 831, 842, 843, 846~849	QRD141J-561	Carbon Resistor	10	560Ω ¼W
		R819, 822, 893	QRD141J-563	Carbon Resistor	3	56KΩ ¼W
		R820	QRD141J-681	Carbon Resistor	1	680Ω ¼W
		R895, 898	QRD141J-683	Carbon Resistor	2	68KΩ ¼W
		R840, 841, 844, 845, 860, 861, 863~866, 888, 889	QRD141J-684	Carbon Resistor	12	680KΩ ¼W
		R894	QRD141J-8R2	Carbon Resistor	1	8.2Ω ¼W
		SW801~821	J43126-001	Tact Switch	20	
		SW826	J44411-001	Rotary Switch	1	
		VR801	J44412-001	Slide Volume	1	10KB
		VR802	J44413-001	Slide Volume	6	20KA × 2
		VR803	J44414-001	Slide Volume	1	1KB
		VR804	J44415-001	Slide Volume	1	10KB
		VR808	J44701-001	Slide Volume	1	20KB × 2
		VR810	J44416-001	Slide Volume	1	10KB × 2
		VR809	J44475-001	Slide Volume	1	20KA × 2
		VR811	J44417-001	JOY Stick	1	1KB
		Connectors				
		CN310	J44098-001	Connector	1	3P (side)
		CN808, 810	J44712-001	Connector	2	3P (bottom)
		CN806	J44707-001	Connector	1	4P
		CN805	J44708-001	Connector	1	5P
		CN807	J44709-001	Connector	1	6P
		CN802	J44710-001	Connector	1	9P
		CN801	J44711-001	Connector	1	10P
			J31915-002	Control P.C. Board		
	5		J31916-002	Control P.C. Board Ass'y	1	(Not supplied as an Ass'y P.C. Board)
		<**WIRES**>				
		TO317, 301	J44445-021	Wire Ass'y	2	2P Shield
		TO302	J44445-014	Wire Ass'y	1	2P Shield
		TO804	J44713-018	Wire Ass'y	1	3P Shield
		TO310, 809	J44713-031	Wire Ass'y	2	3P Shield
		TO810, 815	J44713-035	Wire Ass'y	2	3P Shield
		TO808	J44713-037	Wire Ass'y	1	3P Shield
		TO314	J44713-038	Wire Ass'y	1	3P Shield
		TO811	J44713-040	Wire Ass'y	1	3P Shield
		TO812, 814	J44713-042	Wire Ass'y	2	3P Shield
		TO318	J44714-023	Wire Ass'y	1	4P Shield
		TO303	J44714-026	Wire Ass'y	1	4P Shield
		TO316	J44714-030	Wire Ass'y	1	4P Shield
		TO315	J44714-035	Wire Ass'y	1	4P Shield
		TO307	J44715-030	Wire Ass'y	1	6P Shield
		TO306	J44716-021	Wire Ass'y	1	3P
		TO309	J44716-022	Wire Ass'y	1	3P
		TO806	J44717-021	Wire Ass'y	1	4P
		TO308	J44717-033R	Wire Ass'y	1	4P
		TO313	J44717-033Y	Wire Ass'y	1	4P
		TO305	J44717-035	Wire Ass'y	1	4P
		TO311	J44718-042	Wire Ass'y	1	4P
		TO805	J44719-024	Wire Ass'y	1	5P
		TO807	J44720-010	Wire Ass'y	1	6P

⚠	Item No.	Symbol No.	Part No.	Part Name	Q'ty	Remarks
		TO802	J44721-016	Wire Ass'y	1	9P
		TO801	J44722-015	Wire Ass'y	1	10P
		TO312	J44722-028	Wire Ass'y	1	10P
		TO3	J44722-034	Wire Ass'y	1	10P
		TO903	J44723-001	Wire Ass'y	1	
		TO906	J44724-001	Wire Ass'y	1	
		TO905	J44725-001	Wire Ass'y	1	
		B904	J44726-001	Wire Ass'y	1	
		<OTHERS>				
⚠	6		J44702-001	Power Transformer	1	Continental Europe (220V)
⚠			J44703-001	Power Transformer	1	U.K. only (240V)
⚠	7		QMP3900-200H	Power Cord	1	Continental Europe
⚠			QMP9017-008BS	Power Cord	1	U.K. only

* Parts marked (⚠) are safety parts. When replacing, be sure to use the specified one.

—MEMO—

JX-SV77

[redacted]

JVC

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AV ACCESSORY DIVISION, YAMATO PLANT, 1644, Shimotsuruma, Yamato-shi, Kanagawa-ken, 242, JAPAN

(No. 7008 6B)

Printed in Japan
8911 (V)

JVC

SERVICE MANUAL

VIDEO EDITING PROCESSOR

PAL

JX-SV77 (EG)

Additional Version

With the introduction of the EG version, the following details of our previous JX-SV77 (Video Editing Processor) have been changed.
Since the basic specifications are same as those of the JX-SV77 (E), (EB), (EK), refer to the previously issued Service Manual No. 70086 and No. 70086B together with this booklet.
Operations from the control panel are entirely the same as the JX-SV77 (E), (EB), (EK).

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No. 70086C
Dec. 1989

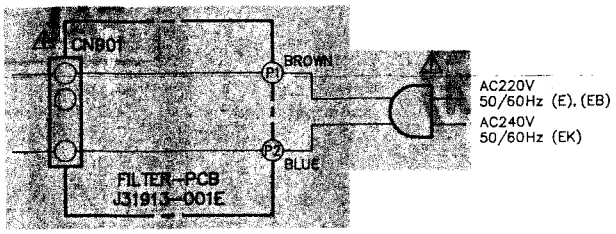
Changes Related to the Power Supply

- Change of power cord

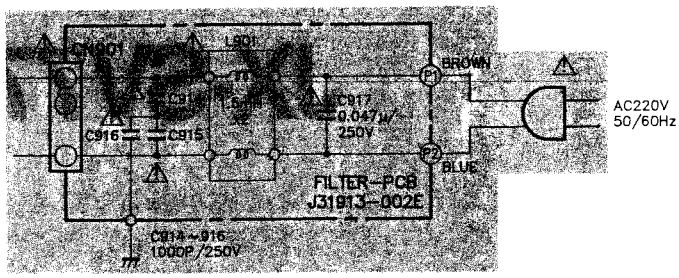
Conventional No.	New Parts No.
QMP3900-200H (E), (EB) QMP9017-008BS (EK)	J42667-001 (EG)

- Change of primary power circuit
  The relay terminal is replaced by a primary power filter.

Conventional circuit

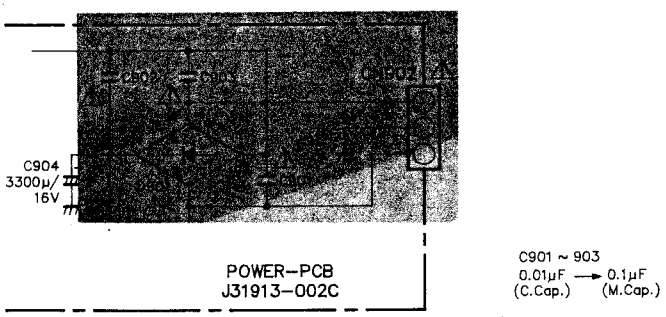


New circuit

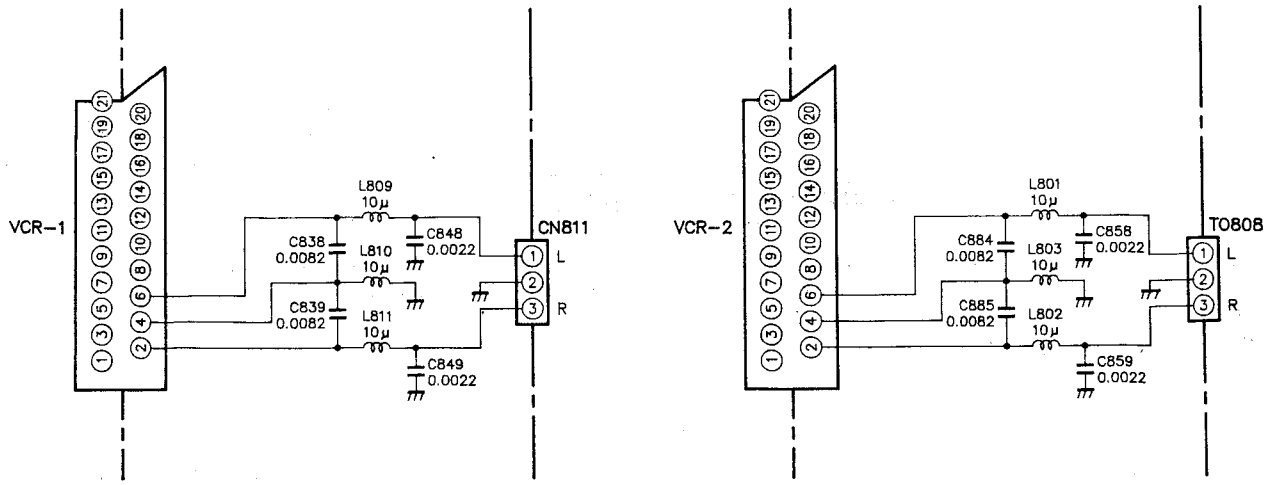


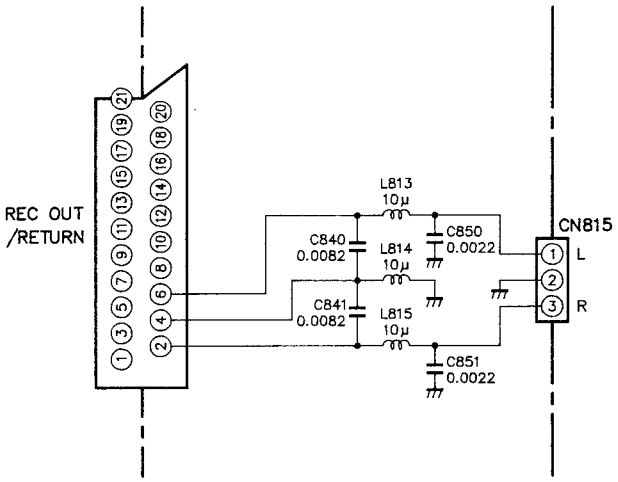
Changes of Electrical Circuit

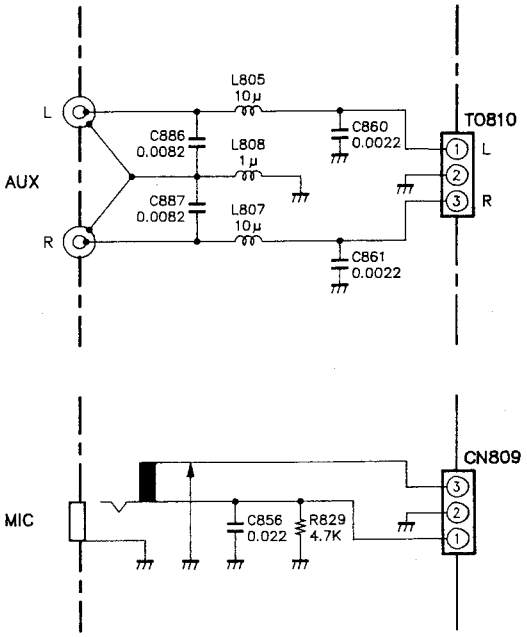
- Secondary power circuit



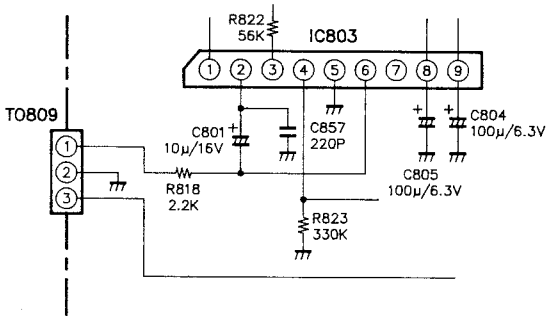
- Audio input terminals
  (VCR-1, 2, REC OUT/RETURN, AUX, MIC)



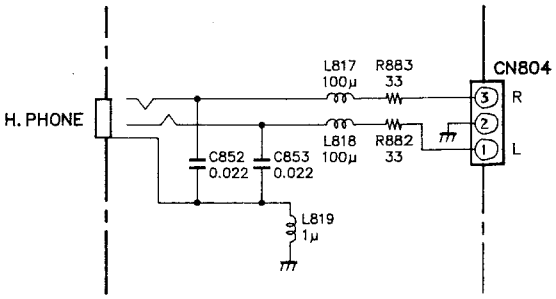




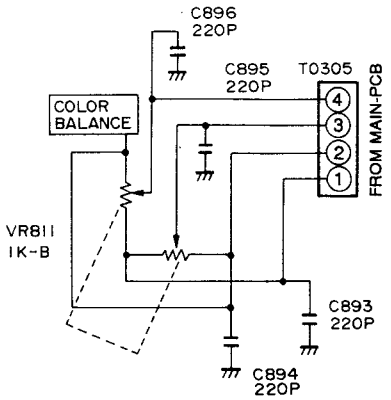
- MIC input circuit



- H. PHONE output terminal



- COLOR BALANCE circuit



Changes of Parts List

- **Additions of Electrical Parts List**
  (The following parts are exclusively for the JX-SV77 (EG) model.)

⚠	Item No.	Symbol No.	Part No.	Part Name	Q'ty	Remarks
⚠			J42667-001	Power Cord	1	for (EG) model
⚠		L901	J43536-001	SC Coil	1	
⚠		C917	QFZ9022-473M	Metalized Mylar Capacitor	1	0.047μF
⚠		C914~916	QCZ9015-102A	Ceramic Capacitor	3	0.001μF (KC Type)
⚠		C901~903	QFV81HJ-104	Mylar Capacitor	3	0.1μF
		C838~841, 884~887	QCY21HK-822	Ceramic Capacitor	8	0.0082μF
		C848~851, 858~861	QCY21HK-222	Ceramic Capacitor	8	0.0022μF
		C857, 893~896	QCS21HJ-221	Ceramic Capacitor	5	220pF
		C852, 853, 856	QCY21HK-223	Ceramic Capacitor	3	0.022μF
		L801~803, 805, 807, 809~811, 813~815	EQL4004-100	Inductor	11	10μH
		L808, 819	EQL4004-1R0	Inductor	2	1μH
		L817, 818	EQL4004-101	Inductor	2	100μH

- **Additions of Mechanical Parts List**
  (The following parts are exclusively for the JX-SV77 (EG) model.)

⚠	Item No.	Part No.	Part Name	Q'ty	Remarks
		J31967-001	Shield Case	1	for (EG) model

- **Additions of Packing Material Parts and Accessories List**
  (The following parts are exclusively for the JX-SV77 (EG) model.)

⚠	Item No.	Part No.	Part Name	Q'ty	Remarks
		PK-JXSV77EG	Packing Case	1	J21220-003 for (EG) model
		QZL1008-001	FTZ Information Sheet	1	

The Mark for Designed Area
(EG)..... West Germany

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